The OIL WEEKLY

A Journal for
Oil and Gas Producers and Field Men

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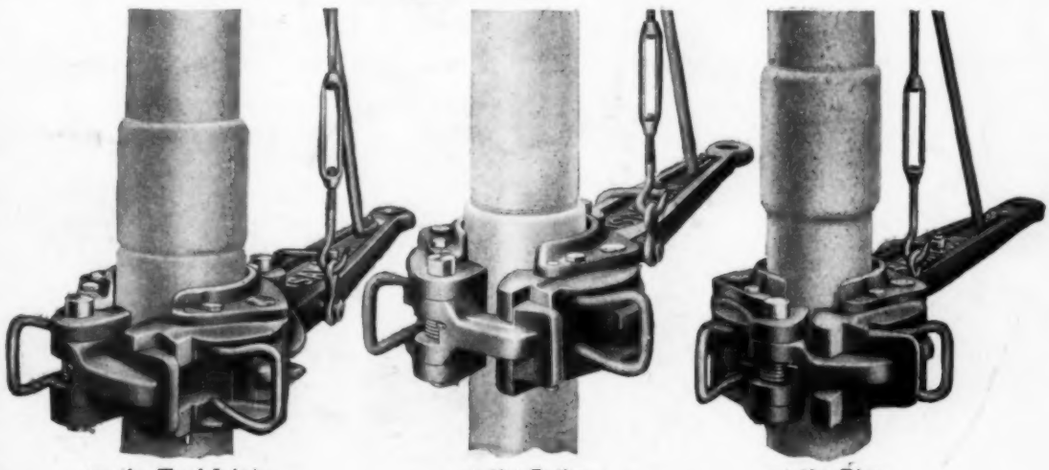

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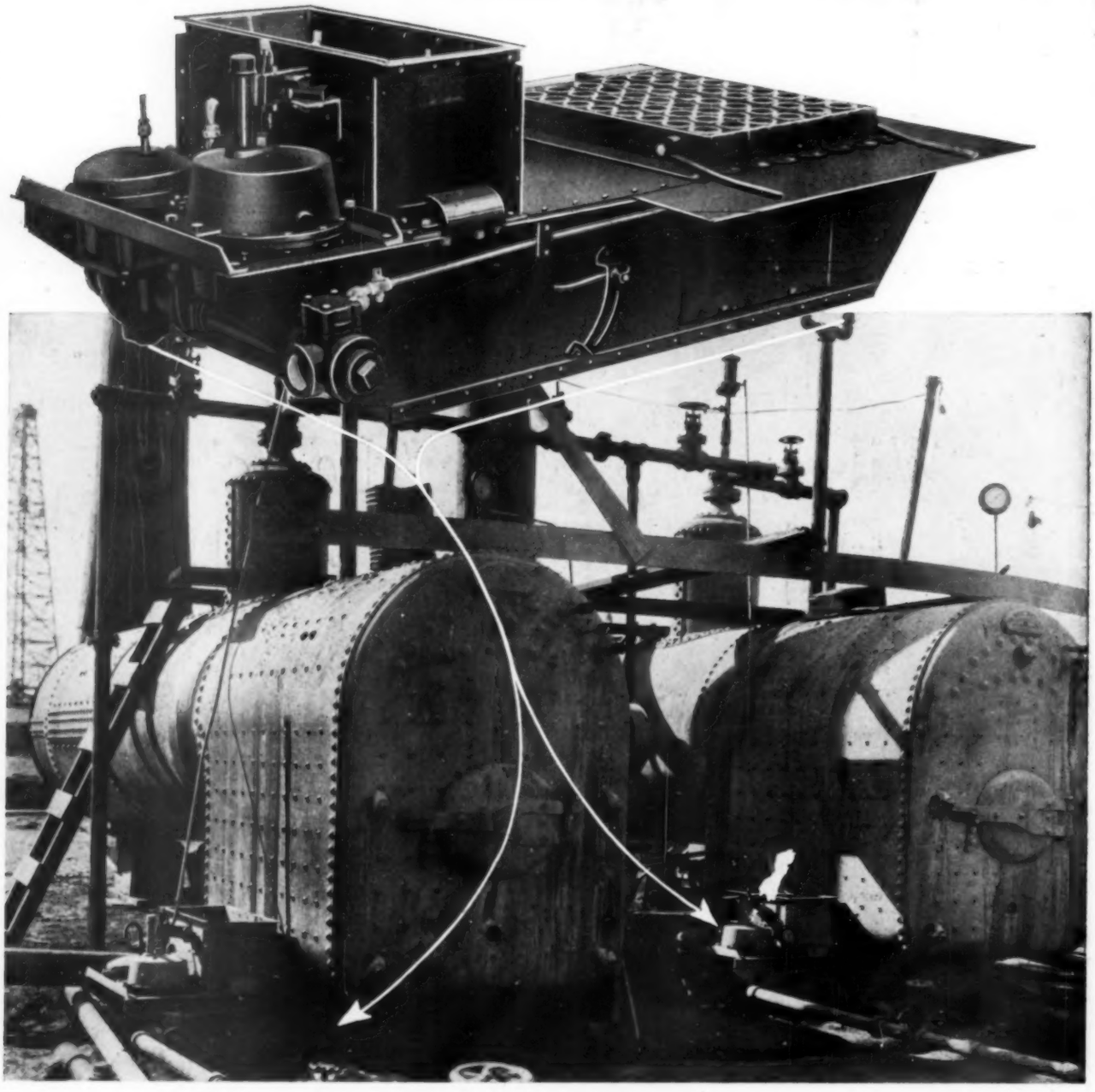

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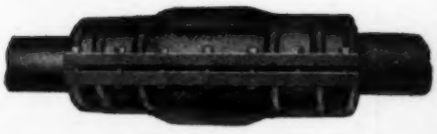

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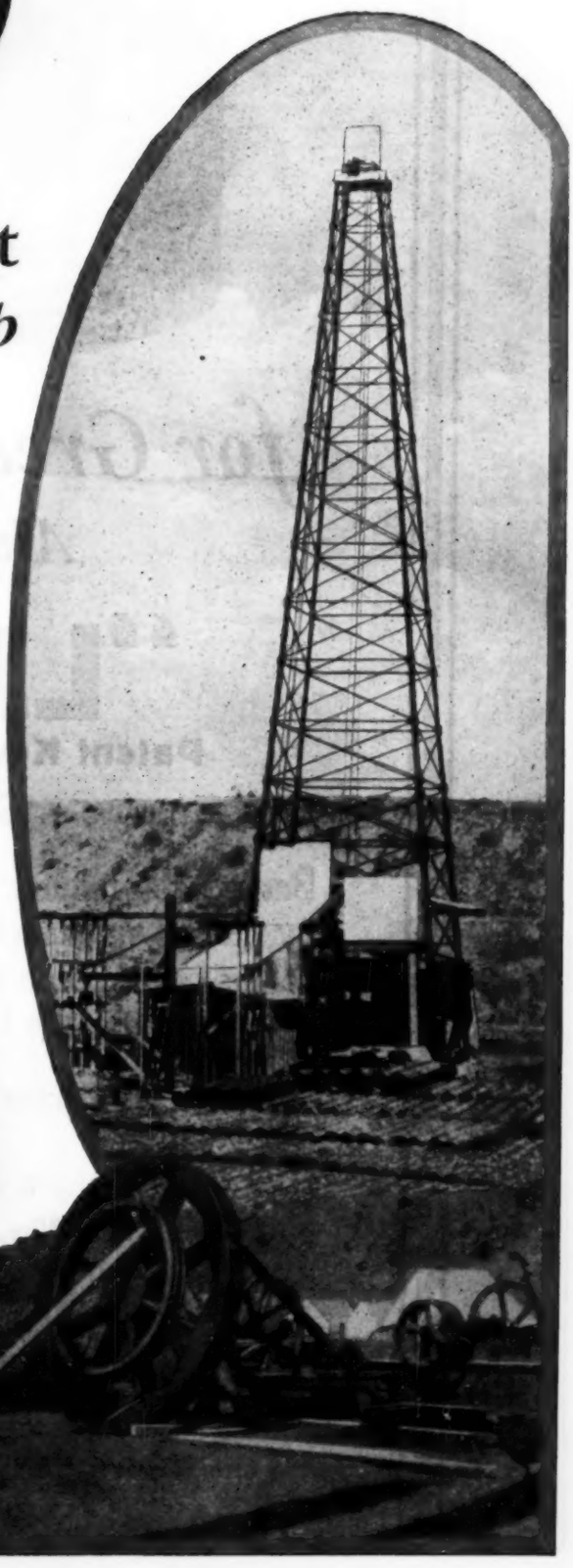

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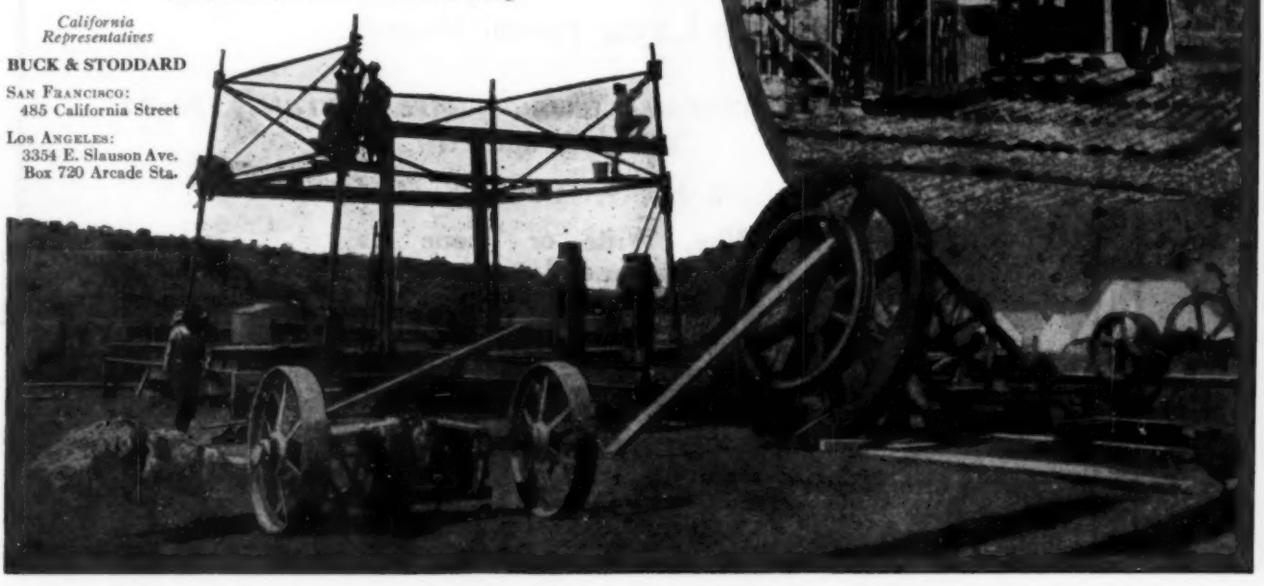

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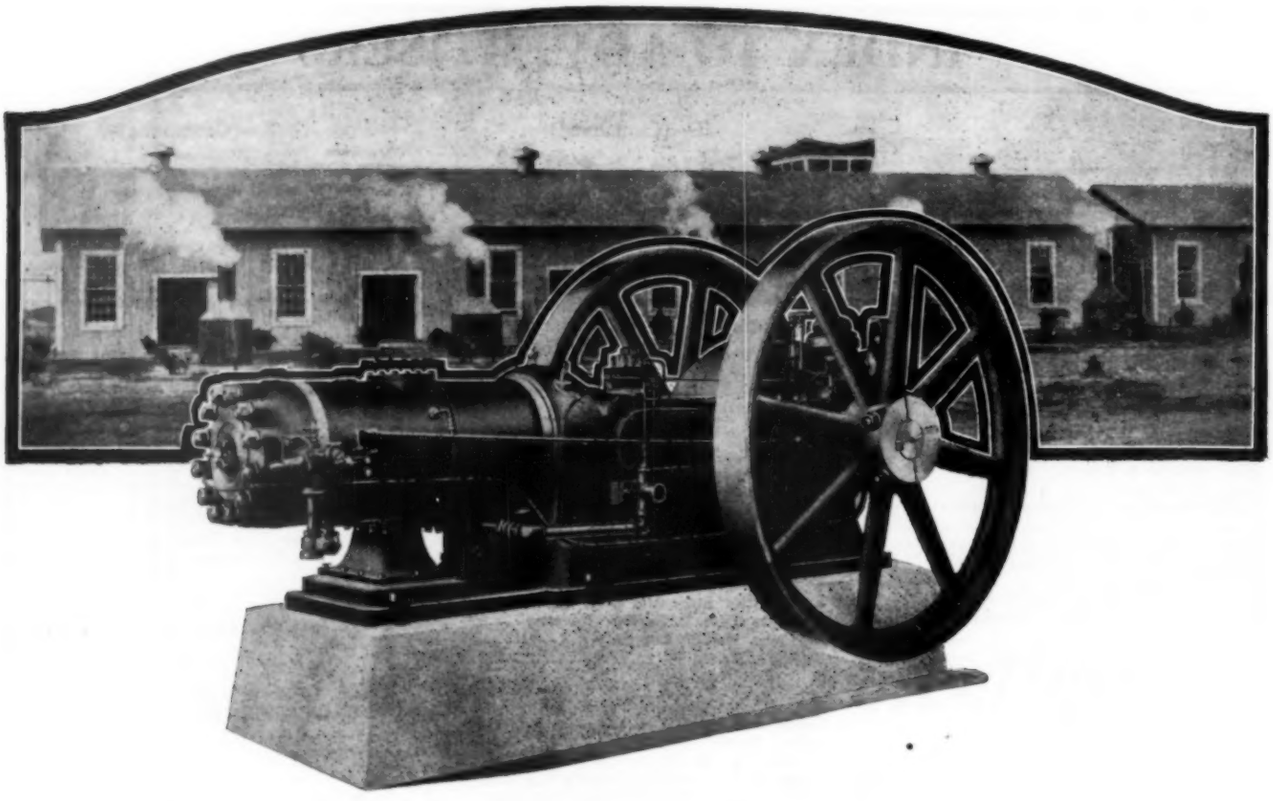

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An International Oil Publication for Oil and Gas Producers

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In this issue.

Good Time For All

The annual get-together of geologists in Houston last week was a success in every detail. The meeting was the largest yet held by the association and the program couldn't be improved upon. Page 21.

March Figures

Tell the story in so far as production is concerned. The total output for the month in U. S. fields shows a large increase over February and clearly reflects the favorable condition of the crude market. Page 13.

Just So So

Is the best way to size up the Mid-Continent situation at present. While no crude is going "begging" neither are purchasers so anxious to make connections as was the case several weeks ago. Page 17.

Kansas Quiet

Recent snows and unfavorable weather in general have retarded field activities in Kansas until practically nothing is being done. All sections of the state have experienced severe weather. Page 48.

Powell Increases

Production at Powell is ranging around 125,700 barrels. All the oil is being taken and premiums are offered on it. At the present time the Hill Tank Farm is proving the most prolific part of the field and its limits to the north are yet to be defined. Page 51.

Out West

Completion of wells in Colorado and New Mexico brings the Rocky Mountain area into the foreground of attention. Much wildcatting is going on and with the approach of more favorable weather other work will undoubtedly be undertaken. Page 47.

Eastern States

A few days of sunshine stimulated drilling activities in Eastern states, but production was not increased in spite of gains in completions. Page 48.

Give 'Em the Facts

Is advice of one operator in speaking of how the present unsatisfactory opinion of the public against the oil industry might be changed. Page 12.

California Up

Due to increases in the Torrance and Santa Fe Springs fields, production in California was up approximately 5500 barrels for the week just closed. At same time stocks showed an increase. Indications are that crude prices will remain stationary for a few weeks. Page 45.

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KEY TO ABBREVIATIONS

Following is the explanation of abbreviations and signs used in drilling reports, completions, etc.: *—dry, abandoned well; ‡—salt water; †—junked and abandoned; ¶—million cubic feet of gas; abn—abandoned; bbls—barrels; b. s.—basic sediment; cas—casing; co—cleaning out; dk—derrick; dr—drilling; fsh—fishing; ft—feet; in—inches; lcn—location; m—milling; N. S. E. W.—North, South, East, West; r—reaming; sd—shut down; sdtr—sidetracking; sp—spudded; sr—straight reaming; std—standardizing; sw—salt water; td—total depth; ur—under reaming; wo—workover; wosr—waiting on standard rig.

Cotton Valley

With three producers, two of which are already connected to pipe lines, Cotton Valley is looking like an oil field. No new locations have been announced, but prospects are encouraging. Page 54.

El Dorado

A destructive windstorm which swept the El Dorado and Smackover fields last week, destroyed several hundred derricks. This has resulted in a serious, though temporary, loss in production. Page 54.

Cromwell Looms

The Cromwell pool in Seminole County, Oklahoma, is looming as a factor in Oklahoma production. Pipe line companies are rushing work on lines to enable them to handle the daily production of the pool. Page 49.

In Canada

The British Petroleum, Ltd., is moving material to Calgary for four tests to be made on section 30-46-6w4. Definite locations have not been made yet, but much of the equipment is already on the way to the district. Page 55.

Archer County

Two new pipe lines are being laid to the Archer County pools to relieve the already over taxed lines in the field. Wells are being pinched in awaiting completion of the new lines. Page 50.

Reagan County

Two tests are about ready for completion in Reagan County and nine others are drilling in the immediate vicinity of the producers. If the two wells to be completed soon are successful, the producing area will be extended materially. Page 66.

Gulf Coast

Advances in the price of Gulf Coast crude with a slight increase in production are the two important events of the week in the coastal area. A good well from the deeper sand at Orange was brought in by the Sun Company. Page 52.

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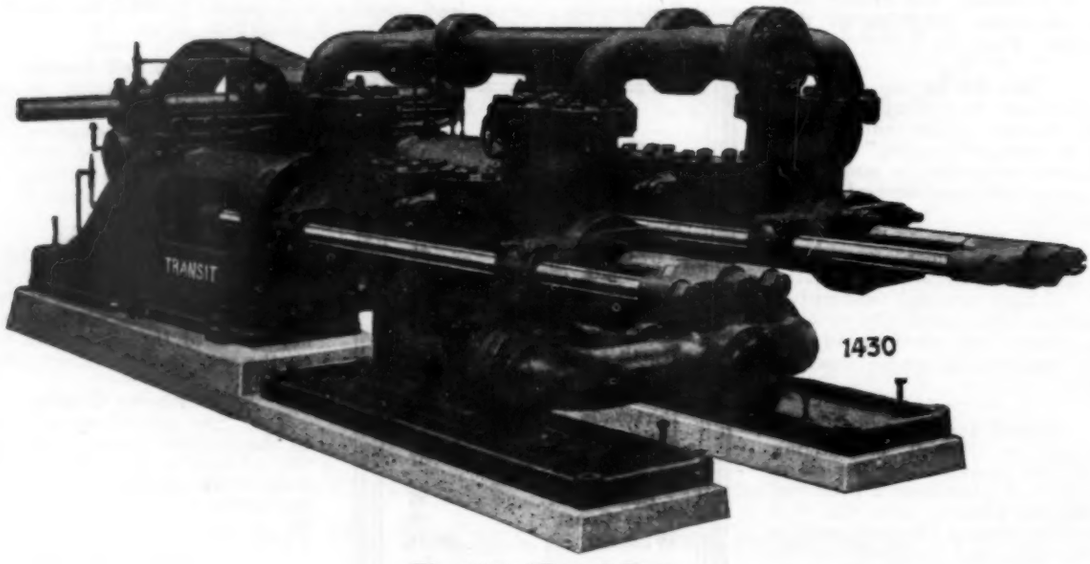

Fig. 1430—"Texas" Type.

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THE OIL WEEKLY

An International Oil Publication for Oil Producers

ESTABLISHED 1916 — MEMBER AUDIT BUREAU OF CIRCULATION — VOL. XXXIII-No. 2

Let Them Know

On another page of this issue we print an interview with W. R. Guiberson in which he voices the opinion that the membership of the Chamber of Mines and Oil of California should hold meetings more often than once each year, and suggesting more co-operation within the ranks of the oil industry.

We agree with Mr. Guiberson both as to the industry in California and other parts of the country where petroleum is produced and refined. Get together meetings of the oil men twice or four times a year in their respective geographical sections, in addition to national gatherings such as the meetings of the American Petroleum Institute, would go a long way in securing for the industry the co-operation within its ranks which will echo to the public in countering the misinformation upon which the public is being fed by politicians and sensational newspapers.

As has been pointed out on this page before, the oil men have been so particular in keeping themselves apart from competitors that they have engendered what approaches upon suspicion of each other; so much so that the public and press are to be in a measure excused for their suspicions.

As Mr. Guiberson points out, nothing but sensational news about oil ever gets into the newspapers. Executives of oil companies who have made known their distaste for giving information to the press can readily understand this situation if they will but think. This writer speaks as one inspired when he says that the average oil man is as loath to put out information about his affairs as is a murderer to talk about his crime before the trial. And the subordinates around the executive offices have been so well instructed about what they shall say to the newspapers that when one appears there is an air of seclusion that smacks of something to hide.

It would appear that the only news the oil companies want printed is the financial statement for a good year, and no enthusiasm about that unless some bonds are to be floated.

In the meantime the camp followers of the industry—the stock sellers who drag the good name "oil man" through the mail fraud trials, are seeking to get highly colored publicity matter into the news columns in furtherance of their schemes. The newspapers and the public know only the "oil man" who makes himself known, and naturally they are inclined to the belief that there is but the one kind.

Of course some of the oil men have been misquoted and misunderstood in the newspapers. That is probably because they have not made themselves known to the men in that business, and because of that reticence about which we spoke which gives the impression that all is not being told when something is given out for publication.

Since it is apparent that propaganda of the wrong sort is proving detrimental to the oil industry, it is also easily to be seen that the condition can be overcome through a counter stream in the same channel. The industry does not need a propaganda mill—there is plenty of good news material already available. We speak about the romance of the oil industry and then let it be told in the superlative of the stock seller. The public thinks it knows all about the big grab of the Teapot, but nobody knows about the wildcatting that led to the discovery of the cause of the turmoil.

Getting away from our own suspicions of ourselves is the first step. Get together meetings in which all members of the industry will get to know each other personally is a move in the right direction, and such gatherings give opportunity for the leaders of the industry to put forth statements that will help to bring the public to the understanding that all oil men are not high-binders and thieves.

The OIL WEEKLY wants only such subscribers as are engaged in the oil producing or pipe line business, or sub-branches of the producing and pipe line business. It has no desire for investor circulation, and it reserves the right and will exercise the right to reject subscriptions coming from persons whose only interest in the oil industry is through the purchase of oil stock.

R. L. DUDLEY, Publisher.

Oil Men Should Get Together More Often

W. R. Guiberson gives out interview in which he says California Chamber should meet twice a year

Los Angeles, Calif., March 29.—That members of the Chamber of Mines and Oil of California should hold meetings oftener than once a year and foster a greater spirit of co-operation is the opinion of W. R. (Dick) Guiberson of Los Angeles, vice president of the Guiberson Corporation and a "working" member of the Chamber.

Mr. Guiberson thinks at least two meetings should be held every year, if not four. He thinks the importance of unity of action to offset false information getting to the public should be stressed and he is willing to get into harness and work for a greater co-operation. In fact, Mr. Guiberson feels that the newspapers of the country, should be more fair to the oil industry and that the editors should be told that every well is not a gusher, that many times thousands and thousands of dollars are thrown away in drilling a dry hole.

He also agrees with A. L. Weil, general counsel for the General Petroleum Corporation, who addressed the Chamber of Mines and Oil banquet recently in Los Angeles when Mr. Weil took the oil men to task for their lack of co-operation and who lambasted them a little for their backwardness in this respect.

"That the oil industry is sadly in need of co-operation is certainly an established fact," said Mr. Guiberson this week. "For some reason there seems to be an insatiable determination on the part of certain individuals high up in political ranks, to institute drastic measures in their attempt to stifle the industry with ludicrous legislation. In every case the men responsible for these movements are absolutely ignorant of the whys and wherefores of the industry and know about as much about it as Adam knew about pajamas.

"The public generally has no opportunity to learn anything about the oil business. They look upon it in the light of fortunes made and know nothing of the millions spent in its development. The newspapers do not give space to it comparatively speaking, except when news of a rather sensational nature breaks, and there is no opportunity for the great mass of the people to learn anything about it of real merit.

"It seems to be singled out as the one great big target to shoot at and the shooting will continue unless the oil men of the country get together and stand as a unit for fair treatment.

"The oil industry as a whole asks for no special favors. It simply asks to be let alone; to be permitted to regulate its internal affairs to the best interests of all concerned unhampered by legislation promulgated by individuals who haven't the least conception of right and wrong.

"The oil industry has more men with real 'nerve' than any other industry in the world. From the very inception of the industry real 'he' men have played the important roles. It required nerve to plunk down hundreds of thousands of dollars as did the pioneers of the industry before a drop of oil was produced and that same brand of nerve has continued to manifest itself in the opening up of every field throughout the oil bearing areas of the world. This class of men, as a whole, needs make no apologies.

"There has been and will ever be certain unwelcome notoriety due to the machinations of over zealous individuals connected with the industry, but the industry itself remains unimpaired.

How long this condition will exist depends upon the attitude of the individual members themselves. Co-operation is the keynote of success, and the oil companies of every section should realize this.

"The recent banquet of the Chamber of Mines and Oils at the Hotel Biltmore emphasized the great necessity of closer co-operation. There is no unity of action now, it is the haphazard and single. There should be closer association, and such affairs as the banquet above referred to should be held oftener and on such occasions general discussion entered into regarding important questions and, also, means of disseminating wholesome propaganda to educate the general public, that they might know the truth of the bone and sinew of the industry."

Retirement Resolutions Pall on Senate; Sinclair Gives Bond for Contempt Hearing

Washington, D. C., April 2.—A plea of not guilty was entered on April 1 in the criminal court of the District of Columbia by Harry F. Sinclair, arraigned on an indictment for alleged contempt of the United States Senate. Mr. Sinclair's attorney obtained permission to withdraw the plea within ten days and file a demurrer or other paper attacking the validity of the indictment. Mr. Sinclair gave bond in the sum of $5000 for his appearance for trial.

A special grand jury has been called to meet on April 16 and will probably hear the evidence gathered by Atlee Pomerene and Owen J. Roberts, special counsel in the oil investigation in connection with the supposed criminal features of the oil leases. No formal statement has been issued that this matter will come up before the grand jury, but it is understood that there is no other business that the regular grand jury could not handle.

Edward L. Doheny donated $34,900 to the Democratic National Committee and not $75,000 as he stated when he appeared before the oil investigating committee, George White, former chairman of the national committee declared during the course of his testimony on April 1.

Assistant Secretary of the Navy Roosevelt opposed the transfer of the naval oil reserves to the interior department, declared Senator Wadsworth of New York, speaking in the Senate on the resolution introduced by Senator Dill of Washington, calling for Mr. Roosevelt's retirement. There is every indication that future resolutions calling for retirement of high government officials will not go through congress as easily as they did in the past. That calling for an investigation of the eligibility of Secretary of the Treasury Mellon for the office he holds introduced by Senator McKellar of Tennessee, being tabled after a strong defense of the secretary by Senator Reed. Apparently sensing the reversal of sentiment, none of the democratic members who have been prominent in pushing the resignation resolutions previously offered gave any support to Senator McKellar.

The secretary continues under fire, however, by the senate committee which is investigating affairs in the internal revenue bureau and which is now inquiring into the refunding of taxes to corporations, including the Gulf Oil Corporation, in which Secretary Mellon is a minority stock holder and has been asked by Senator Cousens of Michigan to furnish the committee with a list of all the companies in which he is interested.

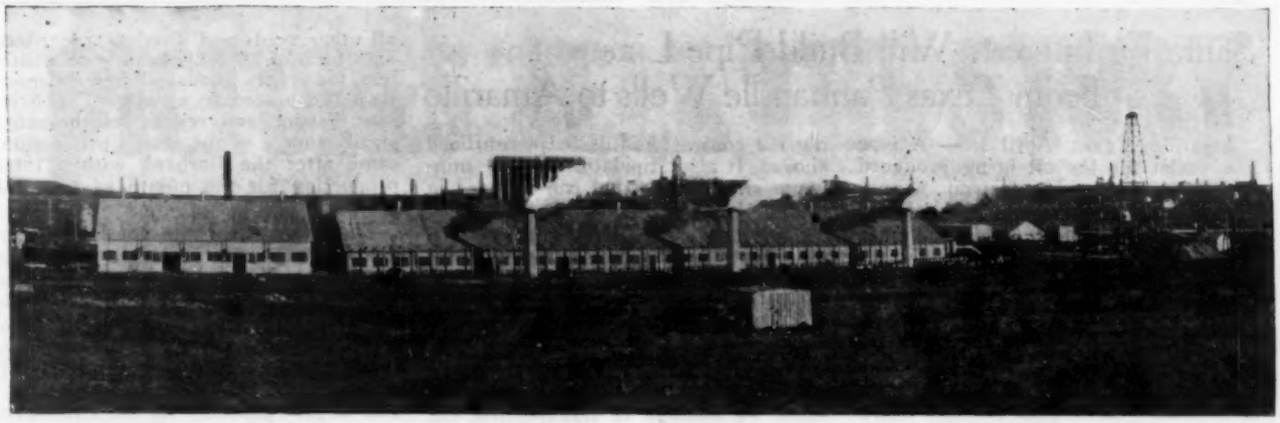
The oil investigating committee will hold no further hearings until April 7th.

Magnolia Will Build Welded Line to Luling

Luling, Texas, April 1.—Welded pipe is to be used by the Magnolia Petroleum Company in its proposed line to the Luling field from its Mid-Continent-to-Coast trunk line system. As was announced last week, this line will be approximately 180 miles in length, and will tie into Magnolia's trunk line at the Hull pump station in Liberty county. Eight inch pipe is to be used in order to provide carrying capacity for increased production in the Luling district, and also for handling the production of other southwest Texas oil fields later on.

This will be the first line of any great length that Magnolia Petroleum has welded the pipe joints.

Until this line can be completed and placed in operation Magnolia proposes to build additional steel storage at its tank farm near Luling to handle its crude purchases that are in excess of the capacity of its skimming plant at Luling. Twenty-seven 55,000 barrel tanks have been erected already on this tank farm, and materials for three additional tanks arrived last week.



Scene in the Burbank pool of Osage County, Oklahoma, where operators are getting ready to launch what is expected to be the largest drilling campaign yet experienced in the state. In the foreground is the Natural gasoline plant of the Phillips Petroleum Company, one of the largest producers in the field —Photo by Griggs, Bartlesville.

Crude Output Responds to Firm Market

Production in U. S. fields for March shows marked increase over previous month

RESPONDING directly to advances in the price of crude oil throughout the country, all sections except the Mountain states show marked increases in the amount of oil produced during March. The heaviest increase was in Texas where production was boosted more than 1,500,000 barrels with the bulk of this increase coming from the Powell district. Other north Texas districts contributed small amounts as increases over last month. Next to Texas, Oklahoma showed an increase of approximately 900,000 barrels. Production for the entire United States reached a total of 59,301,453 barrels as compared with 55,601,015 barrels during the preceding month.

Mountain states showed a decrease of 65,909 barrels, due largely to the extremely bad weather which has tied up all development work in that section throughout the entire month. April will probably show a slight increase in northern sections, but no appreciable increase can be expected until spring opens in full force.

Although there has been considerable unfavorable weather in the Mid-Continent and Coastal sections, field activities have shown marked increases of 495 completions, 160 producers, 171 gas wells, 84 failures, and 110,567 more barrels of flush production than was reported during February.

Crude price trends have kept steadily on the increase but drilling has not been widespread enough to develop promising new fields. The general tendency throughout the industry points to a much more encouraging situation and operators are confident that a reasonably profitable year is ahead. Stocks are being drawn on already in certain sections of the country, and this, in the opinion of prominent oil men, is one of the best things that can happen to the industry.

Production figures and drilling statistics can be expected to show further increases during the next few weeks with the coming of weather suitable for field work. With crude prices sufficiently high to maintain a wholesome stimulus, the spring will undoubtedly be a busy one in oil fields everywhere.

North Texas

Flush production furnished by the heavy run of completions scored in Archer county's group of semi-shallow pools during the month of March enabled the county to register a gain of 174,770 barrels in pipe line runs as compared with the totals for February, and also gave it a comfortable lead in daily production over all other fields in the North Texas district. Burkburnett and Electra fields and Young County gained in monthly output in March as compared with the totals for the short month of February, but fell short of their January totals, indicating that their increased drilling activity since the first of the year has not yielded sufficient new production to offset the natural decline of old wells.

Archer County experienced the most active month in its history as an oil producing area during March, having reported 154 completions, of which 110 were oil producers with a combined initial flow of 26,470 barrels, or an average of 240 barrels per well. This high average was made possible by the completion of a number of flowing wells in the Wilmot-Wilson field ranging from 400 to 1000 barrels initial. The county is destined to experience another busy month in April, as field reports at the close of March showed nearly 200 operations underway or planned for immediate drilling, and a large percentage of these were for wildcat locations. Archer County's production in March amounted to 787,465 barrels, as compared with 612,695 barrels in February. Except for minor

MARCH U. S. PRODUCTION

Following is the gross estimated production of crude oil in the United States for the month of March as compiled by The OIL WEEKLY:

California	20,330,290
Texas	11,690,143
Oklahoma	12,575,621
Mountain States	4,031,891
Arkansas	3,688,256
Eastern States	3,065,910
Kansas	2,166,881
Louisiana	1,752,461
Total	59,301,453

PAST TWELVE MONTHS

The record for the past twelve months is an interesting study for comparison purposes, the following table giving field statistics for all states in the Union with the exception of the Mountain States and California:

Month—	Completions	Producers	Gas wells	Failures	Initial Prod.
March	1,804	1,083	207	514	293,829
April	1,703	1,134	184	385	270,593
May	2,005	1,369	170	467	289,299
June	2,379	1,634	166	584	418,249
July	1,919	1,256	172	511	420,546
August	1,210	939	189	364	506,815
September	1,546	990	292	264	631,453
October	1,078	633	181	264	396,135
November	1,038	760	25	253	562,231
December	1,447	1,032	50	355	224,794
January, 1924.	926	554	153	219	71,781
February	1,105	798	40	267	183,204
March	1,510	948	211	351	293,772

UNITED STATES FIELD STATISTICS

Following are the completions, showing producers, gas wells, failures and initial production of crude by states, except California and Mountain States for the month of March, as compiled by The OIL WEEKLY:

States—	Completions	Producers	Gas Wells	Failures	Init. Prod.
Oklahoma	353	238	30	85	98,834
Kansas	48	28	5	15	2,980
Kentucky	92	72	2	18	2,612
Mississippi	..	..	..	..	....
New York	19	19	..	..	124
Ohio	149	62	55	32	1,192
Pennsylvania	95	62	21	12	392
Tennessee	2	1	..	1	10
W. Va.	150	42	76	32	414
Louisiana	33	14	17	2	2,780
Illinois	5	4	..	1	106
Indiana	12	8	..	4	668
Arkansas	120	108	5	7	22,385
Texas	432	290	..	142	161,275
Total	1,510	948	211	351	293,772

Santa Fe Interests Will Build Pipe Line From Texas Panhandle Wells to Amarillo

Amarillo, Texas, April 1. — A pipe line outlet for the oil being produced near the Carson-Hutchinson county line in the Panhandle district is almost certain to materialize within the next few months as a result of a contract made late last week by Dorsett Carter of Oklahoma City, president of the Coline Oil Company, with the trustees of the S. B. Burnett ranch to start work on a line from the field to a point near Amarillo within 30 days from date of contract and to have the line ready for operations by September 28, 1924. The Burnett ranch is in Carson county, with a small strip extending over into Hutchinson county, and is at present the most prolific oil producing area in the Panhandle, but developments have been retarded because of the remoteness of the completed wells from either railroad or pipeline facilities. In order to encourage immediate construction of a pipe line from the field to market the oil, the Burnett Estate is giving Dorsett Carter a five year lease on 640 acres of the Burnett ranch in four separate sections, providing the contract is fulfilled as outlined above. It also stipulates that the minimum size of pipe that can be used in the line is six inches.

Since the Coline Oil Company is a subsidiary of the Santa Fe railroad, which is the nearest line to the Panhandle district oil field, it is understood that Dorsett Carter and associates propose to build the pipe line to stimulate drilling activity, and at the same time create a volume of tonnage for the Santa Fe railroad in transporting the materials to the field and hauling the crude in tank cars to distant refining centers. The route of the proposed pipe line from the field to Amarillo will require between 40 and 50 miles of pipe, and can be covered in record time, as the surface is mostly flat and open, while no important steams will be encountered. No announcement has been made as to what disposition is to be made of the crude when piped to Amarillo, or whether it will be used to operate the Reese Allen Refining Company's 1500 barrel skimming plant standing idle at Amarillo.

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extensions to the Iowa Park and K-M-A fields, the old producing areas in the North Texas district failed to contribute any important developments in March.

The Panhandle district of Texas is again attracting the interest of the major companies in leasing and drilling activity as result of The Texas Company's first well on the Burnett ranch in upper Carson County flowing approximately 1500 barrels of high gravity pipe line oil at 3018 feet. This well had been shut in for more than a year for storage, and when cleaned out and worked over during the first week in March the well began its steady flow for the first time. A 55,000 barrel tank has been erected on a nearby lease to handle the crude from the well.

Eastland and Stephends Counties and other nearby producing areas forming the Central West Texas district continue to show steady gains in drilling activity since crude prices recovered from their low level, but the operators as a whole are limiting their developments to one or two tests at a time and very little flush production is available in present proven leases. Although Stephens County reported approximately 607,665 barrels of production in March, as compared with 589,175 barrels during the short month of February, the country fell short of the January totals during both of these months.

Wildcat activity in Central and West Texas is largely centered around the developments taking place in Reagan and Crockett Counties, where several completions are due towards the latter part of April. The discovery well in Reagan County on University land continues to maintain its high production level of 150 to 190 barrels daily on the pump, and its performance is attracting new concerns to the district.

Corsicana-Powell-Mexia-Richland

The production of the Corsicana-Powell field jumped to 150,000 barrels daily for a short period during the month of March as result of deeper drilling of about ten wells on the Hill tank farm section of the field. The first well to be drilled deeper went through a layer of shale formation into a lower sand that furnished a heavy flow of pipe line oil and adjoining lease owners lost no time in following suit. Some of the pumping wells that were drilled to the lower sand increased from 5000 to 24,000 barrels daily, but the prolific sand proved to be limited to a small area centering on the Hill lease, as salt water wells were obtained in some of the tests deepened. All of the big wells obtained from the lower sands have since developed b. s. and water trouble, while several have quit producing entirely. The performance of these wells has encouraged considerable new activity to be started on outside locations along the west fringe of the structure between the T. & B. V. railroad and Chambers Creek, as the limits of the producing area has not been entirely defined by dry holes on this side of the field.

The Corsicana-Powell field is credited with having produced approximately 3,876,800 barrels of crude during March as compared with a total of 2,986,385 barrels during the month previous.

The Richland area in the lower part of Navarro County, and situated about mid-way between the Currie and Corsicana-Powell fields, failed to add any new producers during March, but two completions are expected early in April in a southwest direction from the discovery well. A salt water well was completed by Max Gutman et al's H. A. Swink (1162 acres) 1, located southeast of the discovery well, after drilling sand at 3015 feet, but this test logged the formation about 150 feet lower than normal for production.

Oklahoma

The total monthly production for Oklahoma for March is 12,575,621 barrels. Of this amount Burbank, leading all other pools and districts, contributed a total of 2,918,439 barrels or a little less than fifty thousand barrels more than the preceding month. The Bristow district, referred to as the most steady source of the state's production, came after the Burbank with a total production for the month of 1,544,234 barrels.

The increase in the total of other fields comes in the major part, through the entrance of the Cromwell pool in northeastern Seminole county. With six wells producing a little better than seven thousand barrels of oil per day, the field will more than likely rival her sister field of Wewoka in a short time. The largest producer for the Cromwell pool, the Hoffer well being the latest addition to the pool, made a little better than 2000 barrels during the first day and has held the average well.

The bringing in of a 3000 barrel well from a 760 foot sand near Coweta, marked the advent of the largest shallow well for Oklahoma in some time.

Possibly the most important completion of wildcat nature was the Clark and Cowden well in section 25-6-6w on the "Red Creek Anticline" of Jefferson county. However, the Wilcox Oil and Gas Company wildcat gasser in Lincoln county should be given some consideration.

On account of the recent sale of the Osage leases at Pawhuska, drilling statistics show that the total number of rigs now running or under construction are far in excess of any number reported in many months. Just what the total production of the Burbank pool will be can not be predicted as it will be remembered that several dry holes have been reported on the extension tracts of the pool, however, such reports have had little effect upon the selling price of the leases, as shown by the enormous prices paid by the major companies at Pawhuska.

Kansas

Kansas seems to be holding her own in production reports at the present time. For some time the state's production has been on a steady decline but this has been partially checked by the advent of new production such as the Lamp pool near Coffeyville, the Russell County well of the Valerius Company and the Cowley county well of the Waite Phillips Company.

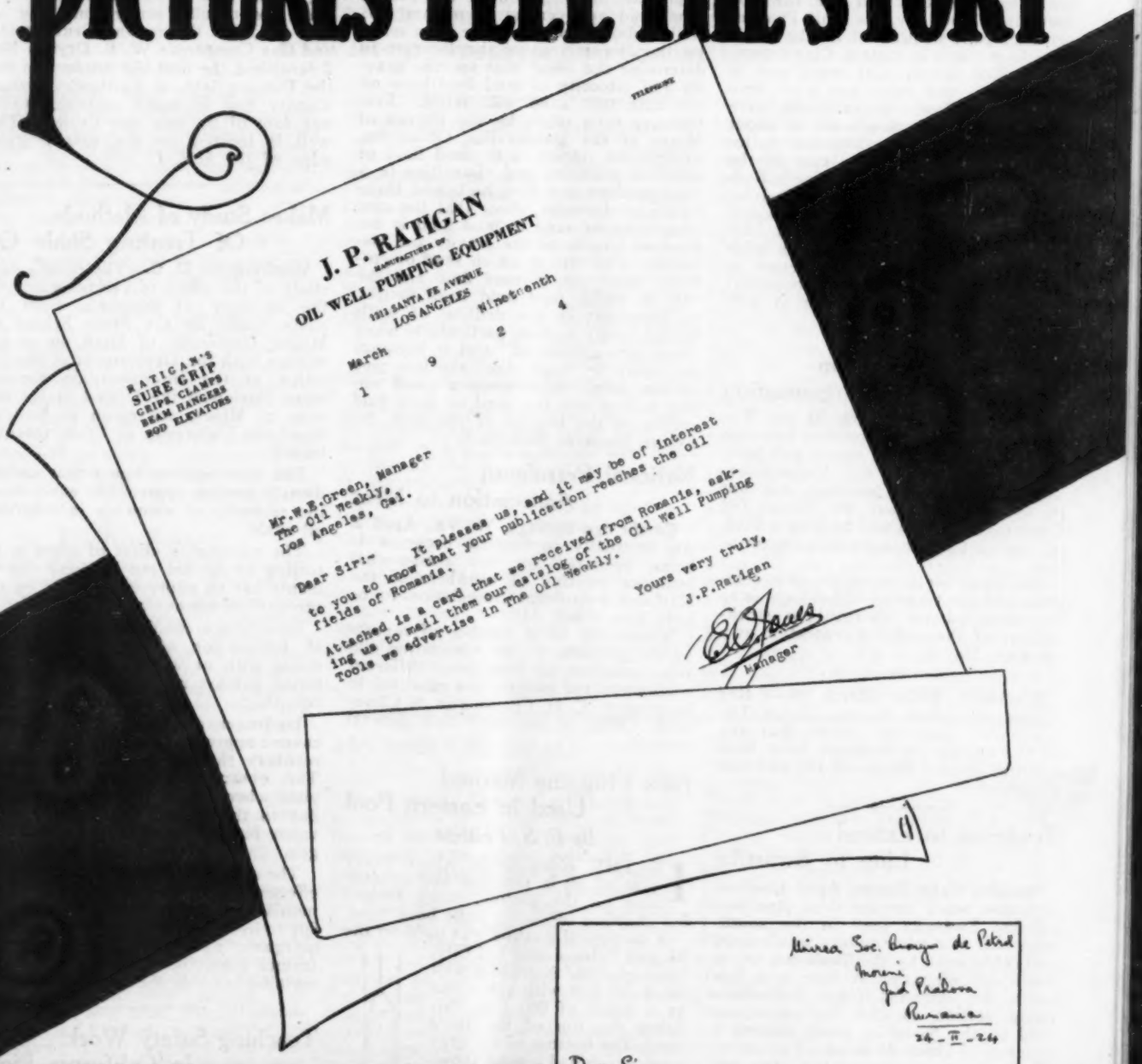
The Cowley county well, which is now owned by the Waite Phillips, the Independent Oil and Gas Company and the Alcorn Oil Company, is as steady a producer as ever completed. Coming in with an initial production of 300 barrels per day, that average has been maintained, shown by the fact that the well is now producing 311 barrels per day.

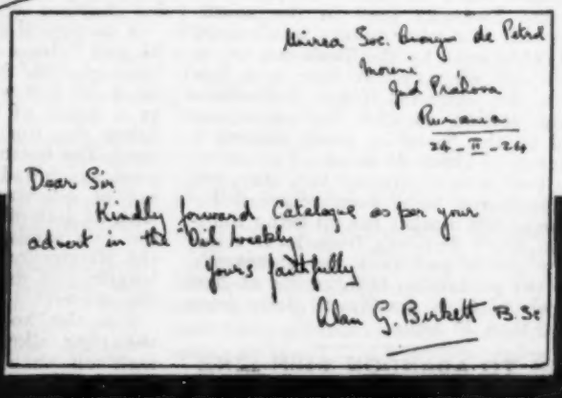
Although the two big pools, Eldorado and Greenwood, are contributing almost half of the oil from the well defined pools, these two fields may be far in arrears before the year is out. Just what is the extent of some of the newly discovered pools of Kansas will be determined during the current year.

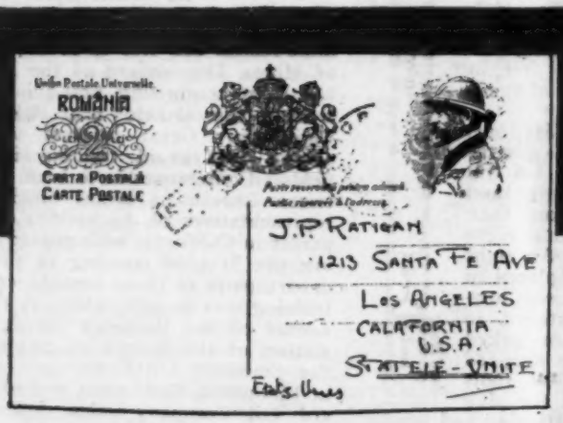
The total production for the month of March is estimated at 2,166,881 barrels, with Eldorado contributing 517,080 barrels to gain the honor of first place on the production tables. Greenwood is closely following Eldorado with a total monthly production of 493,600 barrels.

(Continued on page 40)

PICTURES TELL THE STORY


J. P. RATIGAN
MANUFACTURER OF
OIL WELL PUMPING EQUIPMENT
1213 SANTA FE AVENUE
LOS ANGELES
RATIGAN'S
SURE GRIP
GRIPS, CLAMPS
BEAM RANGERS
ROD ELEVATORS
March 9
Mr. W.E.Green, Manager
The Oil Weekly,
Los Angeles, Cal.
Dear Sir:-
It pleases us, and it may be of interest to you to know that your publication reaches the oil fields of Romania.
Attached is a card that we received from Romania, asking us to mail them our catalog of the Oil Well Pumping Tools we advertise in The Oil Weekly.
Yours very truly,
J.P.Ratigan
Manager





The OIL WEEKLY has more than 450 paid foreign circulation and goes into more than 30 foreign countries.

Gulf Has Show at 3846 Feet in Clay County

Wichita Falls, Texas, April 1.—Having failed to make a well from the 3400 foot sandy lime pay, the Gulf Production Company's third test on the C. M. Worsham ranch in eastern Clay county was drilled deeper last week and is showing oil and some gas from lime pay at 3846 feet. Preparations were being made early this week to shoot the lower pay level. This test is located less than one mile east of the Worsham discovery well. Gulf's Boddy 1, another wildcat being drilled for the deep pay in Clay county, is reported drilling below 3530 feet in blue shale, while the same company's wildcat test on the Nocona structure in Montague county is showing considerable oil with hole full water at 3470 feet.

Pierce Oil Corporation Forming New Organization

Richmond, Va., March 31. — The Pierce Petroleum Corporation has been formed to acquire the assets and business of the Pierce Oil Corporation. The new company, however, will not in any way supplant the Pierce Oil Corporation, which will become a holding rather than an operating organization.

The plans for forming the new company and the transfer of holdings is to be submitted for approval to stockholders of Pierce Oil Corporation at a meeting, May 5.

Blackwell, Okla., March 29.— Ray Otstot, president of the Otstot Development Company, denies that any of the company's holdings have been acquired by the Blackwell Oil and Gas Company.

Texhoma to Extend Line to Swastika

Wichita Falls, Texas, April 1.—Construction work on the first pipe line for the Swastika pool in the southwest part of Archer county was started early this week by the Texhoma Oil & Refining Company. A four inch line is to be extended from Texhoma's pump station in the Texhoma-Gose field to the Swastika pool, making a distance of about 23 miles. The Swastika pool was discovered last May, but developments have been retarded because of the market for oil being limited to small demands from local skimming plants and tank car shipments. Present production is in excess of 2000 barrels of high gravity oil daily from more than 30 wells.

ASK TO ABANDON PIPE LINE

Cheyenne, Wyo., March 31.—Illinois Pipe Line Company will abandon its line from the Little Lost Soldier field to Fort Steele on approval from the Wyoming Public Service Commission. Producers and Refiners already have a line serving virtually the same territory.

New York, N. Y., April 1.—For the first time in three years the entire fleet of the Standard Oil Companies of New Jersey and New York are in full operation, due to the demand for oil abroad.

Mud Fluid and Cement For Oil and Gas Use

Washington, D. C.—In the course of a general investigation of the use of mud fluid and cement in oil and gas wells, laboratory tests have been made by the Department of the Interior to determine the effect that specific gravity and viscosity of mud fluid have on the rate that sand will settle. Preliminary tests made by the Bureau of Mines at the Bartlesville, Oklahoma, experiment station, with mud fluid of different gravities and viscosities in a tin container two feet high and three inches in diameter, show that the rate of settling of sand in mud fluid is dependent largely on the gravity and viscosity. The rate at which sand or cuttings settle out of mud fluid and the rate at which mud fluid itself settles, is important in the drilling of wells by the rotary system, particularly when there is a "twist off" and it becomes necessary to "over shot" the lost pipe in the hole. Also when a small object is lost and the sand or mud fluid settles to the bottom of the hole, the fishing becomes difficult.

National Petroleum Association to Meet

Cambridge Springs, W. Va., April 2. An unusually interesting program is being prepared for the semi-annual business meeting of members of the National Petroleum Association to be held here April 23.

There will be a number of reports on the activities of the Association and representative oil men from different sections of the country are expected to be present. C. D. Chamberlin of Cleveland, Ohio, is secretary and general counsel.

New Plugging Method Used in Eastern Pool

By E. S. Phillips

IN THE older fields where every pint of oil is precious and production on the decline, many devices for shutting off water have been tried.

A successful method was used on the M. and P. lease near Oil City, Pennsylvania. A drilling well filled 500 feet with salt water at a depth of 900 feet, this being the top of the third sand. The bottom of the gray sand, which had a good showing of oil, was at 875 feet, with 25 feet of slate between the two sands. A plug like the illustration, five feet in length, was used to shut off the water.

For the hole, a 5¾ one, the plug allowed a quarter inch on each side. A tin shell was used, tapered and soldered at the bottom, then filled with sand within eight inches of the top. An eight inch lead plug was placed in the top. The shell was lowered by being fastened to the bailer dart, then jerked loose (or it can be dropped into the hole). The tools were then run and the plug battered, the lead flattening and swedging, completely shutting off the water. The 20 feet was used as pocket.

Pioneer Well Making 85 Barrels Per Hour

Fort Worth, Texas, April 3.—Flowing at the rate of 85 barrels per hour from the regular sandy lime pay at 2426 feet, Poe Wilson and Pennant Oil and Gas Company's W. B. Dryson No. 2 furnished the first big production for the Pioneer field on Eastland-Callahan County line in many months. Only one foot of the pay was drilled. The well is located on the southwestern edge of the field.

Makes Study of Methods Of Treating Shale Oil

Washington, D. C.—The results of a study of the effect of various gases on the recovery of ammonia from oil shale, made by the State School of Mines, University of Utah, in co-operation with the Department of the Interior, at the Intermountain Experiment Station of the United States Bureau of Mines, are given in Bulletin 14 of the University of Utah, recently issued.

The investigators found that carbon dioxide has no appreciable effect upon the recovery of ammonia in retorting oil shale.

The scavenging effect of gases in retorting as carried out in these experiments has no appreciable effect on the recovery of ammonia.

Equilibrium conditions in the thermal dissociation of the ammonia produced with or without the use of external gas are not even approached in retorting.

Hydrogen gas at ordinary pressures cannot appreciably affect the ammonia recovery through mass action effects. The observed increase of ammonia yield when using hydrogen is probably due to the hydrolytic effect of water vapor formed by oxidizing the hydrogen.

The action of saturated steam is most effective in increasing the yield of ammonia at 700-800 degrees C., probably due to hydrolytic action on intermediate inorganic nitrogenous compounds formed from the organic nitrogen and metallic bases in the shale residue.

Teaching Safety Work In California Fields

Washington, D. C.—The personnel of mine-rescue car No. 1, of the Bureau of Mines, Department of the Interior, has been conducting first-aid training work in the oil fields near Bakersfield, California. Great interest is being shown in first-aid training in these fields. Conferences have been held between Bureau of Mines officials and representatives of the various oil companies in California with regard to giving the first-aid training to the sales departments of these companies. The training was recently given by the personnel of the Berkeley, Calif., safety station of the bureau to employes of the Standard Oil Company's refinery at Richmond, California, and to Standard Oil Company sales departments employes at Oakland and at San Francisco.

Little Change in Mid-Continent Market

Crude not "begging" but purchasers show let-up in rush for new connections

Tulsa, Okla., April 2.—On the surface there has been no appreciable change in the crude situation in this section of the Mid-Continent field, the demand is still holding up well but there is no big rush about getting oil. However, there is little if any crude going begging, particular reference being made to the low gravity crudes.

The month of April is getting under way with indications that before May has been reached the demand for crude oil in both Oklahoma and Kansas will have shown a spurt with possibly another advance in the posted price. Fair weather in many sections of the Middle West, Northwest and Upper Southwest is supplanting the rain, sleet and snow of the past three weeks and if this continues for a few days the refined oil market will be quick to respond to the increased consumption of motor fuel; this in turn will react favorably on the producer.

To Start Refinery

While there are scattered instances of a quickening in demand for crude in Oklahoma the general situation does not reflect this condition. Reports from Tonkawa in Northern Oklahoma are that the Tonkawa Petroleum Corporation, the Constantin interests, are preparing to resume operations at their refinery in the northwest part of the field and are going after crude. Company officials in Tulsa deny press dispatches that the company is offering to pay as high as $3 a barrel for Tonkawa oil. These officials advise that they are willing to pay a 50 cent premium, the same bounty as is being offered by Champlin Refining Company, but no more.

Another indication of the present crude situation is the recent action of the Consolidated Pipe Line Company of Tulsa, the Kistler interests, which is one of the larger independent buyers of crude in Oklahoma fields. The Consolidated has not been paying any premiums of any kind for oil since March 8. R. P. Kistler, president of Consolidated Pipe Line, advises that this policy is for the present and may be changed at any time on account of conditions. Earlier in the year Consolidated was offering a 25 cent premium and in some instances was reported to have offered a 30 cent bounty, although this latter price was denied by company officials.

There has been a noticeable spurt in drilling activity in several sections of Oklahoma and Kansas within the last 10 days. Especially is this the case in the Burbank since the Osage sale and field reports from that section bear out the belief that this increase in development work is not only confined to the limits of the Burbank pool but is general throughout Osage County. Both the Mutual Oil Company and the Mid-Kansas Oil and Gas Company are centering more attention on the Osage and the two companies have just placed in the field a permanent scouting force to scout that area. The Mid-Kansas bought quite a bit of acreage in the Osage at the sale last month and the Mutual bid in on some of the tracts put up.

This same condition holds good in Kansas, although the recent inclement weather has retarded field activity to some extent, even more so than in Oklahoma. There are more wells drilling today in Kansas than at any time within recent years. When spring opens up in proper style the activity in the Sunflower stats is going to register a great big spurt.

The Cromwell pool in Seminole County still looks good. In fact, there appears to have been uncovered in that territory something really important and before the summer is spent this section may have become a determining factor in the trend of the crude market during the late summer and fall. Sinclair Pipe Line Company is making a strenuous effort to obtain a firm grasp on the crude output there and now are paralleling its three inch line into the field with a four inch and will put in a station and will give field gravity service. It now appears that the trend of production in the pool is northward, at least to sections 3 and 4. Operations to date make the north and northwest appear more favorable.

Close observers of the situation in the Mid-Continent are virtually unanimous in stating that the present slowing up in the crude market will react later on in a very beneficial manner, both to producers and to refiners. They point out that this slackening will retard over zealous operators and refiners in their rush for more crude and finished oils until the spring gasoline demand really has gotten under way, after which any increase in activity will only reflect the motoring requirements of the warm weather season.

CONDENSED U. S. PRODUCTION

	Past Week	Previous Week
Mid-Continent, (Oklahoma, Kansas, North Texas	764,165	750,850
California	654,000	645,500
Texas	388,460	376,982
Oklahoma	410,850	404,760
Mountain States	125,450	125,700
Arkansas	124,890	118,650
Eastern States	98,000	96,000
Kansas	71,180	70,635
Louisiana	54,765	54,810
Total	1,927,595	1,893,037

McCorkle Officials to Inspect Proposed Line

Fort Worth, Texas, April 1.—A party consisting of the officers and directors of the McCorkle Pipe Line Company and some of the Canadian and London capitalists that are to finance the company's proposed pipe line project from Southern Oklahoma to Aransas Pass, on the Gulf Coast, are scheduled to arrive here on or about April 10 for the purpose of making an inspection of some of the 41 odd oil fields that the line is to serve, and also to visit the company's refinery and export terminal site on the coast. This announcement was made by Stephen R. McCorkle, chairman of the board of directors, Tuesday shortly before he departed for the East to accompany the party to Texas.

George Casey, a veteran pipe line man and formerly in charge of the Prairie Pipe Line Company's Central West Texas system, has been made general manager of the pipe line department for the McCorkle Pipe Line Company, and has reported for duty at the headquarters of the company in Fort Worth. J. H. Prince, formerly with the Pure Oil Company at Mexia, is to be chief engineer. Ira E. Eells, refinery superintendent for the Panhandle Refining Company at Wichita Falls, and formerly with the Evans-Thwing Interests of Kansas City, is to join the McCorkle Pipe Line Company April 15 and take charge of the construction of a 20,000 barrel daily capacity skimming plant at Aransas Pass, Texas. The purchasing department of the company, which will be maintained at 504 Burkburnett building, Fort Worth, is to be placed in charge of Jim Bradley, who has resigned from the Bradley Equipment Company of Pittsburgh, Pa. after about 22 years of service. C. W. Buskirk, a geologist of Salt Lake City, Utah, arrived in Fort Worth Monday to become head of the geological department of the Producers Union Oil Company. About 80 per cent of the capital stock of this latter concern has been acquired by the McCorkle Pipe Line Company, and it is to be made into an active oil producing company.

North Texas Crude Premiums Reduced

Wichita Falls, Texas, April 1.—Premiums above the posted price on spot crude in the North Texas district have been greatly reduced in past two weeks as result of independent refiners curtailing their daily runs along with a temporary accumulation of stocks on the market. The large quantity of flush production coming from Archer county is the major factor in reducing premiums on spot crude in the North Texas district, as the Wilmot-Wilson section of the county is producing more oil than present pipe line facilities can accomodate, and some of the producers are waiving all bonuses heretofore asked for their spot oil in order to get pipe line connections.

CRUDE OIL PRICE QUOTATIONS FOR ALL FIELDS

April 1.—Effective today, Humble Oil & Refining Company advanced the market price of Gulf Coast Crudes, grade A and B, 20 cents per barrel.

This advance was met by other purchasers of Coastal Crude.

In meeting the advance, the Texas Company advanced the price of Jennings and Vinton crudes, 20 cents per barrel.

EASTERN STATES

	Apr. 5 1924	Apr. 7 1923
New York Transit	$4.50	$4.25
Bradford (Pa.)	4.50	4.25
Other Pa. grades	4.00	4.00
Cabel	2.20	2.76
Ragland	1.10	1.10
Corning	2.15	2.30
Somerset, medium	2.50	2.55
Somerset, light	2.30	2.90

CENTRAL STATES

Illinois	$2.07	$2.38
Indiana	2.08	2.38
North Lima	2.28	2.58
South Lima	2.28	2.58
Plymouth	1.45	1.75
Lodi	1.80	...
Princeton	2.07	2.38
Waterloo	1.55	1.85
Wooster	2.15	2.50
West Kentucky, light	2.21	...
West Kentuck, heavy	2.01	...

MID-CONTINENT

(Prairie Prices Posted Feb. 2, 1924)

Below 30 grav.	$1.25	$ ...
30 to 32.9 grav.	1.45	...
33 to 35.9 grav.	1.75	...
36 to 38.9 grav.	2.00	...
39 gravity and above	2.25	...

(Magnolia Prices 2-2-24)

Below 28 grav.	$1.00	$ ...
28 to 30.9 grav.	1.20	...
31 to 32.9 grav.	1.45	...
33 to 35.9 grav.	1.75	...
36 to 38.9 grav.	2.00	...
39 gravity and above	2.25	...

NORTH CENTRAL EEXAS

	Apr. 5 1924	Apr. 7 1923
Corsicana, light	$2.00	$1.50
Corsicana, heavy	1.00	.90
Thrall	1.00	1.90
Mexia	2.00	2.20
Currie	2.25	2.60
Rockdale-Minerva	2.00	2.00

SOUTH TEXAS

Mirando	.80	.75

SOMERSET

Below 33 gravity	$1.15	$ ...
33 to 35.9 gravity	1.40	...
36 to 38.9 gravity	1.60	...
39 gravity and above	1.75	...

GULF COAST

Grade "A"	$2.00	$ ...
Grade "B" at Blue Ridge, Hull and Pierce Junction	$1.70	...

LOUISIANA-ARKANSAS

Caddo

38 gravity and above	$1.85	$ ...
38 to 37.9 gravity	1.75	...
32 to 34.9 gravity	1.65	...
Below 32 gravity	1.50	...

Homer

35 gravity and above	1.85	...
33 to 34.9 gravity	1.75	...
31 to 32.9 gravity	1.65	...
Below 31 gravity	1.50	...

Haynesville

33 gravity and above	1.75	...
Below 33 gravity	1.65	...

Bull Bayou

38 gravity and above	1.80	2.00
35 gravity to 37.9 gravity	1.65	1.90
32 to 34.9 gravity	1.50	1.85

	Apr. 5 1924	Apr. 7 1923
De Soto crude	1.85	2.20
Crichton	1.65	1.85
Bellevue	1.55	1.35
Jennings	2.00	1.50
Vinton	2.00	1.50
Edgerly crude	1.80	1.50

Smackover

	Texas Co.	Standard of La.	
26 gravity and above	$1.25	$1.35	...
25 to 25.9 gravity	1.10	1.20	...
24 to 24.9 gravity	1.00	1.10	...
Below 24.0 gravity	.85	1.00	...

El Dorado

33 gravity and above	1.85	...
Below 33 gravity	1.85	...
East Field (Calion)	1.00	...

Stephens District

(Posted by Atlantic Oil Company 1-10-24)

28 gravity and above 60 degrees	$1.40	...
26 to 27.9 gravity at 60 degrees	1.35	...
23 to 25.9 gravity at 60 degrees	1.20	...
Below 23 gravity at 60 degrees	1.00	...

WYOMING–MONTANA

Wyoming

(Posted 2-5-24)

Elk Basin	1.95	2.10
Grass Creek	1.95	2.10
Rock Creek	1.70	1.75
Lance Creek	1.90	2.10
Mule Creek	1.10	1.50
Big Muddy	1.50	1.65
Salt Creek	1.60	1.65
Osage	1.90	2.10
Hamilton Dome	1.60	1.65
Pilot Butte	1.25	1.40
Landers	.70	1.30
Torchlight-Greybull	1.95	2.10

Montana

Sunburst	1.05	...
Cat Creek	1.95	2.10

CALIFORNIA

(Crude oil prices at well, 2-6-24.)

Los Angeles and Orange Counties

14 to 19.9 gravity	$1.00	$ .60
20 to 20.9 gravity	1.01	.62
21 to 21.9 gravity	1.02	.65
22 to 22.9 gravity	1.03	.70
23 to 23.9 gravity	1.05	.75
24 to 24.9 gravity	1.07	.80
25 to 25.9 gravity	1.10	.85
26 to 26.9 gravity	1.13	.90
27 to 27.9 gravity	1.16	.95
28 to 28.9 gravity	1.19	1.00
29 to 29.9 gravity	1.22	1.05
30 to 30.9 gravity	1.25	1.11
31 to 31.9 gravity	1.28	1.17
32 to 32.9 gravity	1.31	1.24
33 to 33.9 gravity	1.34	1.31
34 to 34.9 gravity	1.37	1.38
35 gravity and above	1.40	1.45
Fuel Oil	1.40	...

CANADIAN CRUDE

*Petrolia	2.68	2.98
*Oil Springs	2.75	3.05

*Plus 2½ cents bounty.

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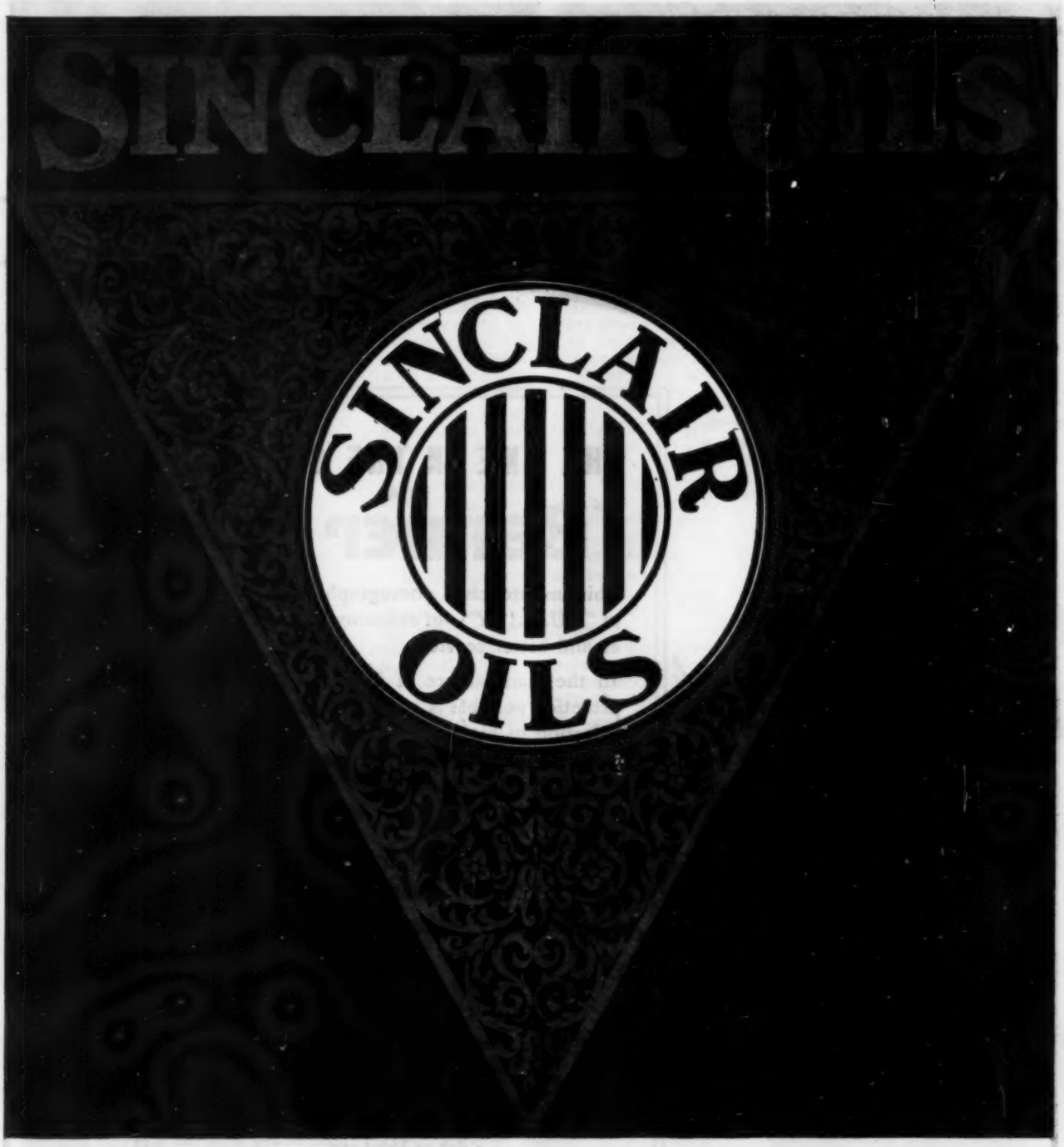

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BEAUMONT, TEXAS

Say you saw it in The Oil Weekly

Geologists Have Best Meet Yet in Houston

Large attendance and constructive program make ninth annual gathering big success

By A. R. McTee
Staff Representative

Houston, Texas, April 4.—With registrations totalling 511, including members and visitors, the American Association of Petroleum Geologists' convention which ended here last Saturday, was declared to be one of the most successful ever held. From the time registration began until the last field trip was completed, the convention had something of interest to offer. The program was entertaining as well as highly instructive. Members and visitors represented more than a score of states of the United States and several foreign countries.

At the close of the first technical session Thursday morning, expressions were heard on all sides that the meeting was starting off in a grand manner, and when the last paper was read Saturday afternoon, the unanimous expression was one of praise for what had been done.

JAMES H. GARDNER
Elected President American Association of Petroleum Geologists for 1924

Thursday morning was given over to the first technical session at which a number of valuable papers were read in full and many others by title only.

The address of welcome on behalf of Houston was made by Commissioner H. A. Halverton and was followed by greetings from the Houston Geological Society by John R. Suman, president of the local society. Following the response by Max W. Ball, president of the association, E. H. Sellards of the University of Texas gave an illustrated discussion of the geology of the Luling Oil Field in Caldwell County.

E. G. Gaylord, geologist for the Pacific Oil Company, San Francisco, read a paper on geological department methods and administration in which he pointed out the scope of a well directed geological department.

The application of dynamics to oil field findings in Southern California was discussed in a paper read by C. G. Willis. J. A. Udden, of the University of Texas, closed the morning session with a short address on the need of a geological museum in the Southwest. Dr. Udden pointed out the great need for a place where fossils can be preserved and studied by geologists in this section of the country. He also stressed the importance of geological information to centuries yet unborn, and emphasized the value of a place where such information might be accumulated by research geologists.

In the business meeting which was held at the close of the Thursday morning technical session, the following officers were elected for the year 1924: President, J. H. Gardner, president Gardner Petroleum Company, Tulsa, Oklahoma; vice president, E. G. Gaylord, geologist, Pacific Oil Company, San Francisco, California; secretary-treasurer, C. E. Decker, Norman, Oklahoma; editor, Raymond C. Moore, Lawrence, Kansas. All other officers were elected unanimously. C. E. Decker and Raymond C. Moore were re-elected to the positions which they held during 1923.

The retiring president, Max W. Ball, summarized accomplishments of the association in his report, following which reports were read by the secretary-treasurer and editor. The secretary-treasurer called attention to the growth of the association during the past three years and the editor commented on the progress made by the association publication.

In acknowledging the honor conferred upon him, J. H. Gardner, the new president, expressed a desire to see the association take research as its one big, constructive aim during the coming year. Mr. Gardner pointed out the scientific standing which the association has at this time, and called attention to the fact that its work reaches to practically every country in the world. He further declared that heretofore geological problems have been solved for the most part by reasoning at desks rather than by research in actual fields.

More than 300 attended the afternoon session Thursday. The papers read were enthusiastically received and one especially caused considerable comment: "The Subsurface Stratigraphy of the Coastal Plains of Texas and Louisiana," prepared by Mrs. Paul Applin, Miss Alva Ellisor and Miss Hedwig Kniker, was declared to possess unusual merit because it discusses a subject in which these three ladies and E. T. Dumble are pioneer workers. The work of Mrs. Applin in studying foraminifera minutely was highly praised by Charles Schuchert, professor of Yale University.

Professor Schuchert read an interesting paper on the value of minute and large fossils in subsurface stratigraphy, using a number of specially prepared slides to illustrate his subject. J. A. Cushman of the United States Geological Survey presented a paper on the use of foraminifera in geologic correlation.

A paper on the correlation of organic shales in the southern end of the San Joaquin Valley, California, was read by G. Dallas Hanna. Mr. Hanna used slides effectively to illustrate his paper and considerable comment was made on the excellence of the specimens shown on the slides.

The theory of control and its application to well production was presented in a paper by Stanley C. Herold, and W. C. McGlothin gave an illustrated presentation of the Powell Oil Field of Texas.

Subsurface observations in Southeastern Kansas was the title of a paper read by Henry A. Ley.

No technical sessions were held Thursday night, in order that delegates might get together in informal meetings and social groups.

MAX W. BALL
Retiring President American Association of Petroleum Geologists

Registrations continued throughout Thursday and when the technical session opened Friday morning, attendance was much larger than on the first day. The Friday morning session started off with an interesting paper devoted to the salt domes of South Texas, Falfurrias, Palangana, Piedras Pintas, Sal del Rey, and La Sal Vieja, read by Donald C. Barton, geologist for the Rycade Oil Corporation. This paper was followed by a discussion of

the Big Hill Salt Dome, Matagorda County, Texas, by Albert G. Wolf. Marcus I. Goldman, United States Geological Survey, then presented an illustrated lecture on a preliminary report of the Petrography of Salt Dome Caprock. Mr. Goldman's discussion was based upon research work being done by the United States Geological Department and caused considerable discussion. Luther White, another Geological Survey man, presented a paper on oil from unclosed structures in Oklahoma, and Roswell H. Johnson ended the morning session with a paper on the theory of water drive oil production.

Promptly at noon the technical session adjourned and convention members left for an afternoon trip to the Barbers Hill and Goose Creek fields. This was the first of several trips in order that personal inspections might be made of a few of the more prominent salt domes in Coastal fields. At Barbers Hill, an old-fashioned barbecue lunch was served the delegates.

The annual banquet, which always caps the climax of the three days get-together, was held at the Rice Hotel, Friday night. Following a well planned program, the affair extraordinary clearly reflected the extensive preparations made by the entertainment committee in its efforts to furnish both amusement and education for the event of the yearly jollification meet of members.

The principal speaker of the evening was W. S. Farrish, president of the Humble Oil and Refining Company. Mr. Farrish spoke on "What I think of Geology and Geologists." He urged members of the geological profession to not overlook the practical side of the subject. Although it was only a few years ago that geology was looked upon by oil men as a "new fangled idea," it has come to be one of the most important branches of the industry, Mr. Farrish pointed out. In commenting upon the probable shortage of petroleum, the speaker declared, "It is my belief that there will never be a shortage of motor fuel and those by-products of petroleum necessary to present commercial enterprise although future years might see such a shortage in fuel oil and heavy distillates."

Mr. Farrish concluded his speech by emphasizing that geologists should go ahead with their field investigations and acquire as much acreage as possible, but at the same time they should urge their superiors against drilling these lands until conditions warrant added production. He predicted a most prosperous year for 1924 and called attention to the fact that the country is already beginning to draw upon storage oil to meet current demands.

The banquet was concluded with an amateur presentation of "Tommy's Libretto," a comedy prepared by J. Elmer Thomas. Dancing followed the play.

The Saturday session drew the best attendance of the whole convention because of several important papers on salt domes.

Alexander Deussen gave a thorough discussion of the distribution, classification and alignment of Gulf Coast Salt Domes. Special slides used by Mr. Deussen called forth much comment because of the authoritative manner in which they portrayed the subject. The slides were prepared by W. E. Pratt, chief geologist of the Humble Oil and Refining Company, and Mr. Deussen.

E. DeGolyer gave an absorbing discussion of the origin of salt domes. He discussed the various theories concerning the origin of salt domes and presented slides of salt dome formations in various parts of the world. Mr. DeGolyer stressed the idea that the question of salt domes is not peculiar to Gulf Coast fields, and pointed out that certain foreign countries know much more about salt dome structures than is known in this country.

Saturday afternoon the session was of general nature and papers were read covering the Graham field, Oklahoma, subsurface conditions in the Okemah-Wewoka district, experiments on the wear of sand grains, an experimental study of faulting, the origin of the Green River formation, a microscopic study of the interrelationship of oil, gas and water, and notes on the origin of petroleum.

Sunday a trip was made to the Texas-Gulf Company's sulphur mine at Gulf, Matagorda County, Texas. A field trip to New Iberia, Louisiana; Avery Island Salt Mine, Jefferson Island and New Iberia domes, was made on Monday and Tuesday. The last official trip of the convention was made on Wednesday to the Palestine and Keechi Salt Domes, at Palestine, Texas.

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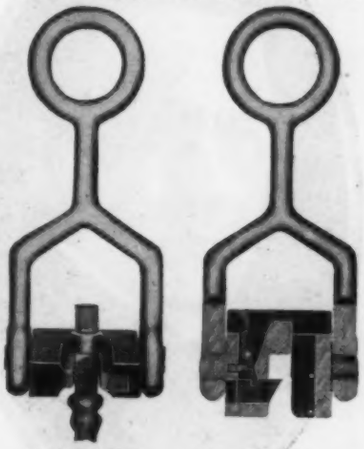

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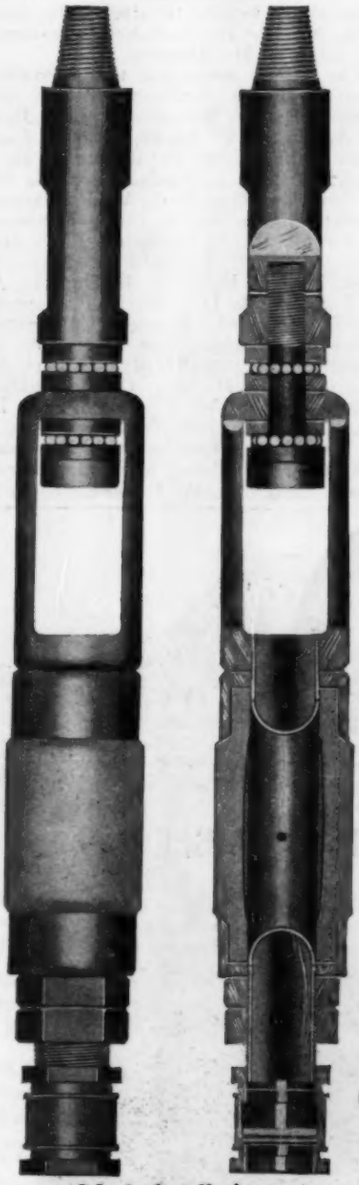

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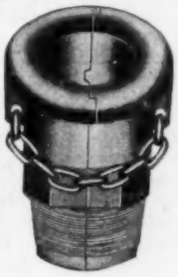

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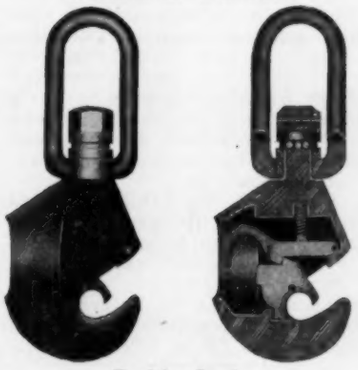

Positive Lock

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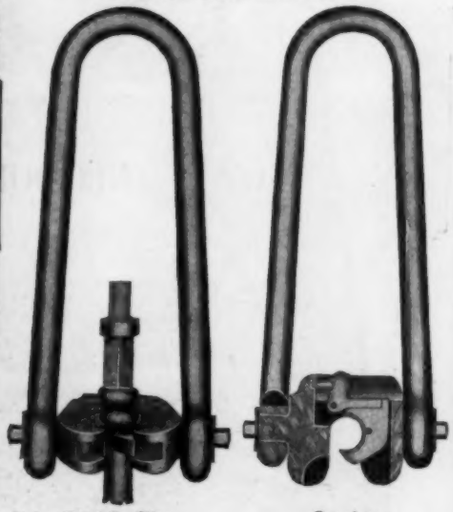

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Former Associates Honor Dr. Dumble With Dinner of Appreciation at Rice

Houston, Texas, March 28.—As a token of the esteem which geologists hold for him, Edwin Theodore Dumble was honored with a banquet at the Rice Hotel Thursday night March 27. The first night of the American Association of Petroleum Geologists convention was selected in order that visiting geologist friends of Mr. Dumble might be present. More than 90 friends, including men and their wives attended the affair.

Perhaps the motive behind the banquet can best be given by quoting from the silver tablet presented to the guest of honor. It reads: "To Edwin Theodore Dumble, in appreciation of your unfailing kindness and consideration during many years association with you in our profession, and of your wisdom which you have always so freely shared with all of us, and as an evidence of our recognition of your many and great contributions to the advancement of science."

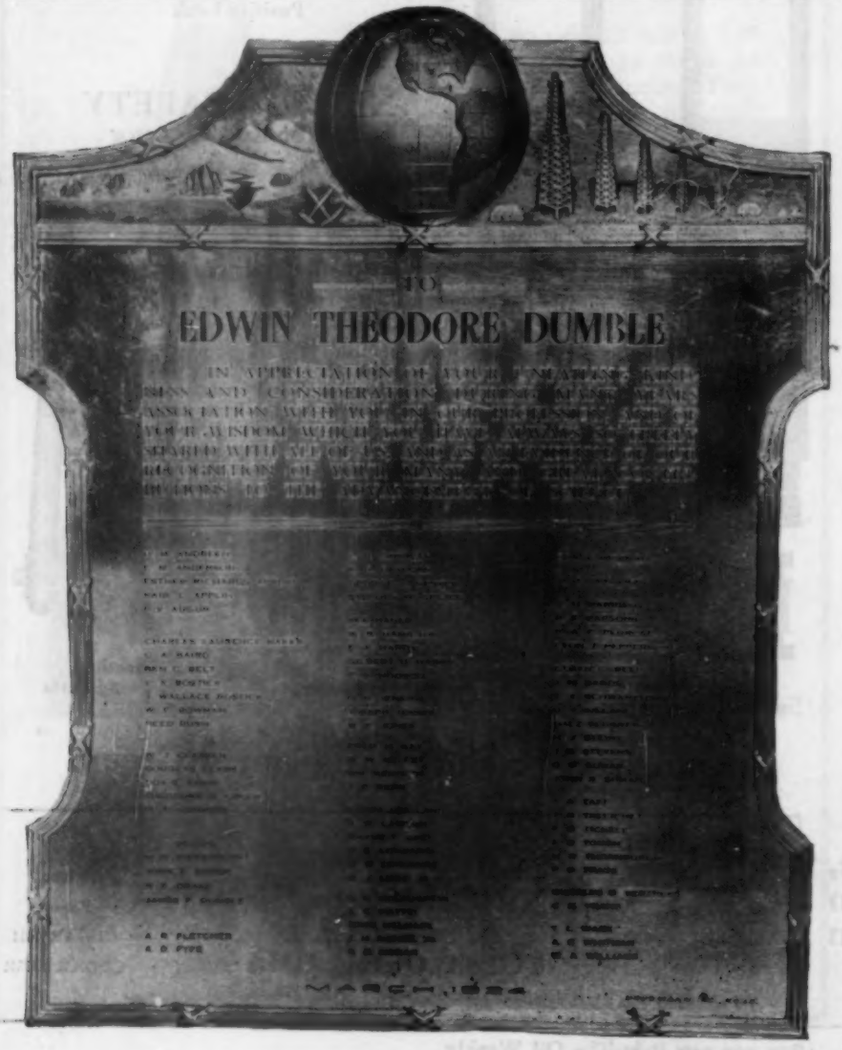
The tablet was beautifully engraved with appropriate designs and the names were engraved by a special process. The silver letters were covered with copper, the copper was then etched away leaving the letters standing out in copper with a background of silver.

At the banquet, presided over by John Suman, speeches were made by Professor W. F. Cummins, E. G. Gaylord, J. W. Bostick and J. H. Tallichett. Professor Cummins announced the purpose of the banquet. Mr. Gaylord gave reminiscences of Mr. Dumble's work as a geologist in California, J. W. Bostick read letters of regret from those unable to attend the banquet, and J. H. Tallichett presented the table to Mr. Dumble.

The tablet contained the following names: H. M. Andreen, F. M. Anderson, Esther Richards Applin, Paul L. Applin, I. V. Augur, Charles Laurence Baker, C. A. Baird, Ben C. Belt, F. X. Bostick, J. Wallace Bostick, W. F. Bowman, Reed Bush, W. F. Classen, Douglas Clark, Roy E. Cohn, Theodore H. Crook, W. F. Cummins, L. C. Decius, H. H. Dievendorff, John F. Dodge, N. F. Drake, J. F. Dumble, A. R. Fletcher, A. D. Fyfe, L. P. Garrett, E. G. Gaylord, George C. Gester, Stephen H. Gester, Lee Hager, W. R. Hamilton, E. A. Hardy, Gilbert D. Harris, F. S. Hudson, O. P. Jenkins, Joseph Jensen, W. F. Jones, Fred H. Kay, W. W. Kelley, Wm. Kennedy, J. B. Kerr, Laura Lee Lane, A. W. Lawson, Wayne F. Loel, M. E. Lombardi, W. R. Longmire, W. J. Luke, Jr., A. C. McLaughlin, A. C. Mattei, John Melhase, J. H. Menke, Jr., R. B. Moran, Grace Newman, E. H. Ochsner, G. H. Parrish, B. E. Parsons, R. A. F. Penrose, Jr., Leon J. Pepperberg, Lyman C. Reed, J. M. Sands, F. X. Schwartzenbeck, G. J. Sielaff, Dale Slusher, H. J. Steiny, J. B. Stevens, G. O. Suman, John R. Suman, J. A. Taff, J. H. Tallichett, F. G. Tickell, F. B. Tough, H. R. Thornburgh, P. D. Trask, Charles D. Vertrees, C. M. Vrang, T. L. Wark, A. R. Whitman, W. A. Williams.

E. T. DUMBLE
Consulting Geologist Southern Pacific Railway Company and known as Dean of Geologists

"Who's Who" for 1923 gives the following account of Mr. Dumble: Dumble, Edwin Theodore, geologist; b. Madison, Indiana, March 28, 1852. s James F. and Mary A. D.; B. S. Washington and Lee U. Va. m Fanny Doswell Gray, of Houston, Texas, June 15, 1876. State geologist of Texas, 1887-96; consulting geologist and mgr. oil properties Southern Pacific Company (Rio Bravo Oil Company, Texas, East Coast Oil Company, Mexico); also consulting geologist, Pacific Oil Company. Fellow geological Soc. America. A. A. A. S., Texas Academy of Science, Mem. Am. Inst. Mining Engineers, Mining and Metall. Soc. America. Cal. Acad. Science. Author: Brown Coal and Lignite; Geology of East Texas; also many reports and papers on geology and mineral resources of Texas and Mexico.

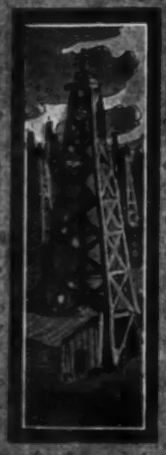


Getting Field Staffs Ready for Summer Work

Denver, Colo., March 29.—As soon as the snow melts in Northern and Northwestern Colorado there is going to be a rush into the new field to locate new structures. The Mutual Oil Company has five geologists and a surveying crew ready to go. The Midwest Refining Company is prepared to send out a party and Marland is assembling a geological force here.

The California Company, subsidiary of the Standard of California, already has several men at work in the vicinity of Moffat county. The Producers and Refiners are organizing a field crew and the Texas Production Company has men in Eastern and Southern Utah.

"If Continental sells it there is no better"



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Petroleum Geology, Past and Present

Science has played important part in development of oil production business

*By Ralph Arnold**

THE science of petroleum geology as we know it today, has been principally developed since the beginning of the twentieth century, in large measure by members of this Association. Futrhermore, it can be said that a large number of individuals have each added something to this new but important branch of economic geology. It is the purpose of this paper to call attention to some of the salient points in this march of progress and to show the influence which our science has had on the petroleum industry which it serves.

In preparing this review the writer has drawn freely upon the published works of his associates as well as upon his personal experience, which has spanned the two decades under discussion. To his friends and associates, whose work has made petroleum geology, and, hence, who are responsible for this paper, he extends his sincere thanks.

Relative Importance of the Various Countries in Oil Production, 1903 and 1922

In order to show that the United States holds the premier place among the nations as an oil producer, and to indicate the relative position of all countries twenty years ago and now as indicated by their annual production, the following table, arranged by countries in the order of their importance in 1903, is given. For purposes of comparison the year of their peak and the production for that year are also given.

In 1903 the United States produced 52 per cent of the world's total of 194,879,669 barrels; in 1922, 65 per cent of the world's total of 851,540,600 barrels. The increase in the world's annual production in the two decades from 1903 to 1922 was 337 per cent; the increase in the annual production of the United States over same period was 451 per cent.

Relative Importance of the Various States in Oil Production, 1903 and 1922

In order to show the relative importance of the oil-producing states in 1903 and 1922, as indicated by their annual production, the table below is offered.

The only states showing a consistent rise in production at the present time are California, Oklahoma, Texas, Wyoming, and Montana; all the rest are on a decline from peak production.

Origin of Oil

The organic origin of oil, first suggested by J. S. Newberry[2] in 1873, and substantiated by Edward Orton,[3] and others, was well established by 1903 through observation and experiment. The original theory has been accepted by almost all geologists, except Coste. Since 1903 there have been some additional important discoveries regarding the subject.

C. B. Morrey,[5] 1903, suggested that bacterial action plays a part in the reactions yielding oil. Such bacteria are anaerobic, or capable of living without oxygen. W. H. Dalton,[4] in 1909, showed that there are two stages in the formation of petroleum from organic material; in the first, biochemical processes predominate; in the second, geochemical or dynamochemical processes. David White,[5] in 1915, and D. E. Winchester stress the importance of plants of low orders in the origin of oil. George H. Eldridge, Robert Anderson, Harry R. Johnson, and the writer in their work in the California oil fields have clearly demonstrated that the principal sources of oil in California is free-swimming, microscopic, unicellular marine plants, called diatoms, many millions of which occupy a cubic inch. The contributions of Murray Stewart,[6] E. W. Shaw,[7] W. H. Twenhofel,[8] and others, with those mentioned above, not only show that oil is probably largely of plant origin but suggest the steps by which the intricate process may be carried out. The effect of dynamic movements on the processes of oil formation and accumulation have been pointed out by several geologists, including A. W. McCoy.

Occurrence of Oil

Through the development and study of numerous new fields and districts during the past twenty years, many new modes of occurrence as regards structure and reservoir rocks have been discovered. Edward Orton,[9] in 1889, was the first to point out commercial deposits of oil on structural terraces or "arrested anticlines." Captain A. F. Lucas in January, 1901, opened the first oil field on a salt dome (Spindle Top) in Texas. L. H. Woolsey,[10] in 1906, noted that oil occurs in synclines where the beds do not contain water. George H. Eldridge, Robert Anderson, H. R. Johnson, and the writer,[11] in 1907 to 1910, found that most of the oil in the California fields occurs on anticlines (85 per cent according to G. C. Gester) or monoclines

TABLE I
Production by Countries, 1903 and 1922
(In Barrels of 42 Gallons)

Country	1903	Peak of Production		1922
United States	100,461,337	.....		551,197,000
Russia	75,591,256	(1902)	80,540,044	35,091,000
Dutch East Indies	5,770,056	(1920)	17,529,210	16,000,000
Poland (Galicia)	5,234,475	(1909)	14,932,799	5,110,000
Rumania	2,763,117	(1913)	13,554,768	9,817,000
India	2,510,259	(1917)	8,078,843	7,980,000
Japan and Formosa	1,209,371	(1915)	3,118,464	2,004,000
Canada	486,637	(1900)	913,498	179,000
Germany	445,818	(1910)	1,032,522	200,000
Peru	278,092	.....		5,332,000
Mexico	75,376	(1921)	193,397,587	185,057,000
Italy	17,876	(1911)	74,709	31,000
Argentine	Began producing in 1907	.....		2,674,000
Trinidad	Began producing in 1908	.....		2,445,000
Egypt	Began producing in 1911	.....		1,188,000
Persia	Began producing in 1917	.....		21,154,000
England	.....	(1919)	1,900	.....
France (Alsace)	Began producing in 1918	.....		.....
Venezuela	Began producing in 1918	.....		2,335,000
Algeria	Began producing in 1919	.....		9,000
Sarawak	Began producing in 1920	.....		2,915,000
Colombia	Began producing in 1922	.....		323,000

TABLE II
Table of Production by States, 1903 and 1922
(In Barrels of 42 Gallons)

State	1903	Peak of Production		1922
California	24,382,472	.....		139,671,000
Ohio	20,480,286	(1896)	23,941,169	6,762,000
Texas	17,955,572	(1910)	8,899,266*	116,670,000
West Virginia	12,899,395	(1900)	16,195,675	7,028,000
Pennsylvania and New York	12,518,134	(1891)	33,009,236	8,443,000
Indiana	9,186,411	(1904)	11,339,124	1,443,000
Kansas	932,214	(1918)	45,451,017	31,588,000
Louisiana	917,771	(1920)	35,649,000	34,171,000
Kentucky and Texas	554,286	.....		8,991,000
Colorado	483,925	(1904)	501,763	97,000
Oklahoma	138,911	.....		146,631,000
Wyoming	8,960	.....		26,232,000
Missouri	3,000	(1916)	17,705	.....
Illinois	Began producing in 1905	(1908)	33,686,238	9,363,000
Montana	Began producing in 1916	.....		2,369,000

*Low point over twenty years.

*Reprinted from the Bulletin of the American Association of Petroleum Geologists.

[2]Ohio Geol. Survey, Vol. I (1873), p. 160.
[3]Ibid., Vol. VI (1888), p. 74.
[4]Ohio Geol. Survey Bull. 1 (1903), p. 313.
[4]Econ. Geol., Vol. IV (1919), pp. 603-31.
[5]Jour. Wash. Acad. Sci., Vol. V (1915), pp 189-212.
[6]Rec. India Geol. Survey, Vol. XI (1910), pp 320-33.
[7]Trans. Am. Inst. Min. Eng., Vol. LI (1915) p. 606.
[8]Am. Jour. Sci. (4th ser.), Vol XL (1915), pp. 272-80.
[9]Ohio Geol. Survey, Vol. VI (1889), p. 94.
[10]U. S. Geol. Survey, Bull. 286 (1906) p. 81.
[11]Ibid. (1907-10), Nos. 309, 398, 406.

Keeping Pipe Off the Ground

By use of concrete foundation blocks on which small pipe is placed parallel, The Texas Company has found a means of keeping pipe off the ground. The method is in use at Humble. The concrete blocks are of pyramid shape, two rows being set for each stack of pipes. Grooves are left at the top and small pipe is placed in these. Then the casing is placed at right angles with these supports of pipe.

sealed by asphalt or faults, or occurs actually in fault zones. E. DeGolyer, in 1915, reported oil in shattered shale above an igneous sill in the Furbero district, Mexico. From 1900 to date, C. W. Hayes, E. DeGolyer, G. Jeffreys, L. H. Huntley, V. R. Garfias, and others have found that oil in Mexico usually occurs in porous or cavernous crests or faulted anticlines or domes in association with igneous intrusions. C. W. Washburne,[12] in 1910, found oil occuring in fissures in the Florence field, Colorado. C. H. Wegemann,[13] reported similar occurrences in the Salt Creek field, Wyoming, in 1917. The writer and his associates, and R. W. Pack, W. A. English, and W. S. W. Kew, in their various reports have called attention to the great importance of unconformities in oil accumulation in California.

Studies in sedimentation by Joseph Barrell, T. W. Vaughan, Marcus Goldman, and others have added information of great economic value to the industry.

Other students of geology have added much to our knowledge during the past twenty years in regard to irregularity of (spotted) production, due to variation in pore space in a given stratum; succession of petroliferous strata and the usually greater lateral extent of the lower oil-bearing sands or zones in any structure; distance covered in the migration of petroleum; minimum inclination necessary for migration; variation of dip at various depths in the same structure, due to unconformities and difference in lateral pressure, etc.

Relationship of Water to Oil

The theory of gravitational separation of gas, oil, and water, based on the difference in the specific gravity of the three substances, and known in general as the "anticlinal theory of accumulation," was placed on a substantial basis by I. C. White and Edward Orton long before 1903. This theory is demonstrated in so many fields, so widely separated, and under so many different conditions that further proof is unnecessary. However, many important discoveries and theories regarding the relationship of oil and water accumulation have been made in the past two decades.

M. J. Munn's[14] hydromotive theory, proposed in 1909, is that water in motion in underground channels carries the oil with it. This theory best explains the accumulations in many of the Pennsylvania fields studied by him and W. T. Griswold, where the strict interpretation of the anticlinal theory does not hold good.

The observations and experiments of C. W. Washburne,[15] in 1914, regarding the importance of difference in surface tension as a factor in the segregation of oil and water, and his theories regarding the role and fate of connate waters in oil sands, have been a marked contribution to the theory of oil accumulation. Likewise, the experiments of A. W. McCoy,[16] who in 1919 showed that when oil-soaked mud is placed near water-soaked sand the oil will move to the sand, are enlightening as to what transpires during the formation of an oil pool.

The diffusion of crude petroleum through fuller's earth has been studied by D. T. Day,[17] J. E. Gilpin, and M. P. Craver,[18] who have reached important conclusions as to the resultant fractionation accomplished thereby.

To the late G. S. Rogers,[19] whose paper on the Midway-Sunset Field, California in 1919, was monographic, must be given the credit for pointing out the importance of a detailed study of the oil accumulations. Rogers, N. M. Fenneman, C. W. Washburne, Johann Koenigsberger, Max Muhlberg, and others, from 1905 to date, have contributed to our knowledge of the temperatures of oil fields, largely through a study of their waters.

Metamorphism of Petroleum

The fact that the fixed carbon contents of coals associated with oil and gas reservoirs furnish a remarkably reliable index of the probability of finding oil or gas in these reservoirs was first shown by David White[20] in 1915; M. L. Fuller[21] and J. H. Gardner[22] elaborated on White's discussion in 1917. Fuller[23] states that the relative probability of finding oil in proper reservoirs is 100 where the fixed carbon of coal is 50 to 55 per cent; 10 where fixed carbon is 55 to 60 per cent; and but 1 where fixed carbon is 60 to 65 per cent. The utilization of this information has saved much useless exploration work.

Gas Pressure and Oil Recovery

Because of the fact that the principal controlling factor of oil production is the pressure of the gas associated in solution, or otherwise, with the oil, the study of the decline of wells resolves itself largely into a study of the declining gas pressure in these wells. Although many geologists, notably C. W. Washburne, R. H. Johnson, and others, have devised various means of showing production declines graphically, it remained for Carl H. Beal, in association with J. O. Lewis, to cover the subject thoroughly. Beal's paper was published as Bulletin 177 of the United States Bureau of Mines in 1919. Utilization of the methods summarized in this book has had a profound influence on the oil industry. One of the most important facts brought out by Beal's and Lewis' work was that wells of the same daily production in any one field can be depended on to yield approximately the same future production.

Estimation of Oil Reserves

Twenty years ago the estimate of oil reserves was computed generally by calculating the contents of the supposed reservoir rock from data regarding thickness, extent, etc., guessing at the saturation and percentage of recoverable oil, and finally arriving at a very rough approximation of the desired information. Now, thanks to the great mass of data available and to the perfection of methods of computation, we get more accurate results. If we know the production of a given well over a reasonable period (even a period of days in some instances), we can calculate with remarkable accuracy the future production of the well by years and in totality, and thus arrive at the recoverable reserve for this well and its surrounding area.

May the writer not state that the estimation of oil reserves is the "king of indoor sports" of the petroleum geologist? The habit was initiated by David T. Day,[24] in connection with the conservation movement espoused by President Roosevelt in 1908. Among

[12] Ibid. (1910), No. 381.

[13] Ibid. (1917), No. 670.

[14] Econ. Geol., Vol. IV (1909), pp. 509-29.

[15] Trans. Am. Inst. Min. Eng., Vol. L (1914), pp. 829-42.

[16] Jour. Geol., Vol. XXVII (1919), pp. 252-62.

[17] Science (new ser.), Vol. XVII (1903), pp. 1007-8.

[18] Bull. U. S. Geol. Survey, Nos. 365 and 475, 1908 and 1911.

[19] Prof. Pap. U. S. Geol. Survey, Part II, 1919.

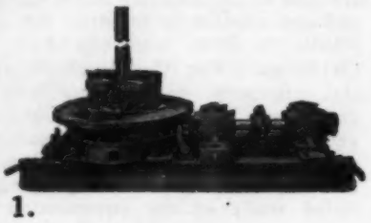
[20] Jour. Wash. Acad. Sci., Vol. V (1915), pp. 189-212.

[21] Bull. Geol. Soc. Am., Vol. XXVIII (1917), p. 643.

[22] Ibid., pp. 675-720.

[23] Econ. Geol., Vol. XV (1920), p. 432.

[24] Bull. U. S. Geol. Survey, No. 394 (1909), pp. 30-50.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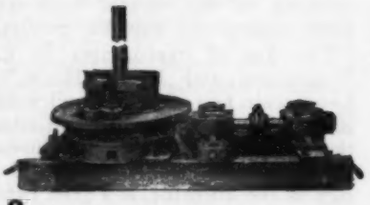
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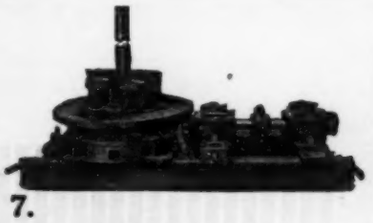
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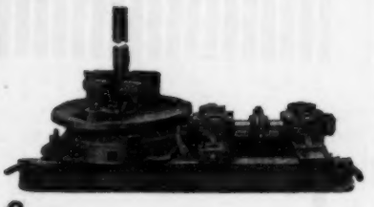
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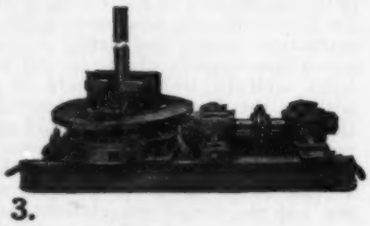
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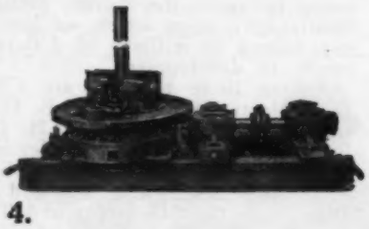
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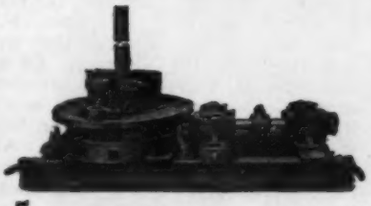
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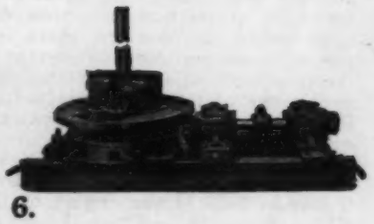
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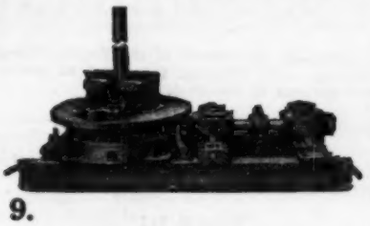
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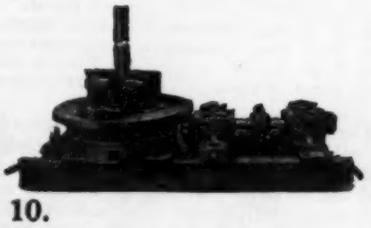
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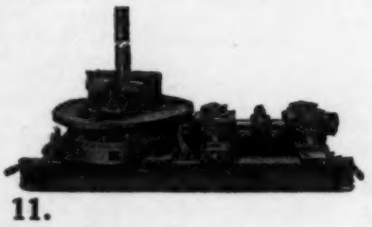
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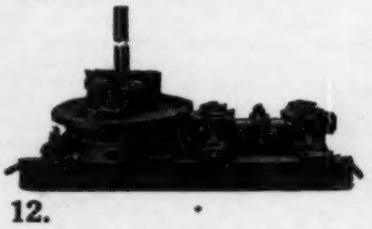
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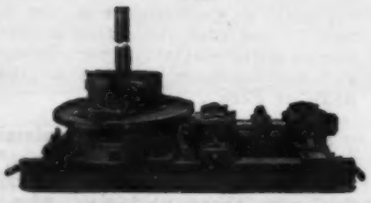

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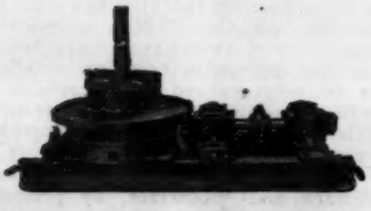

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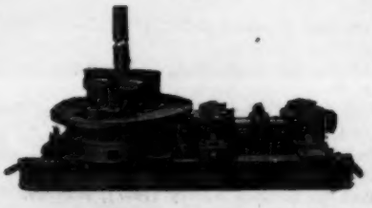

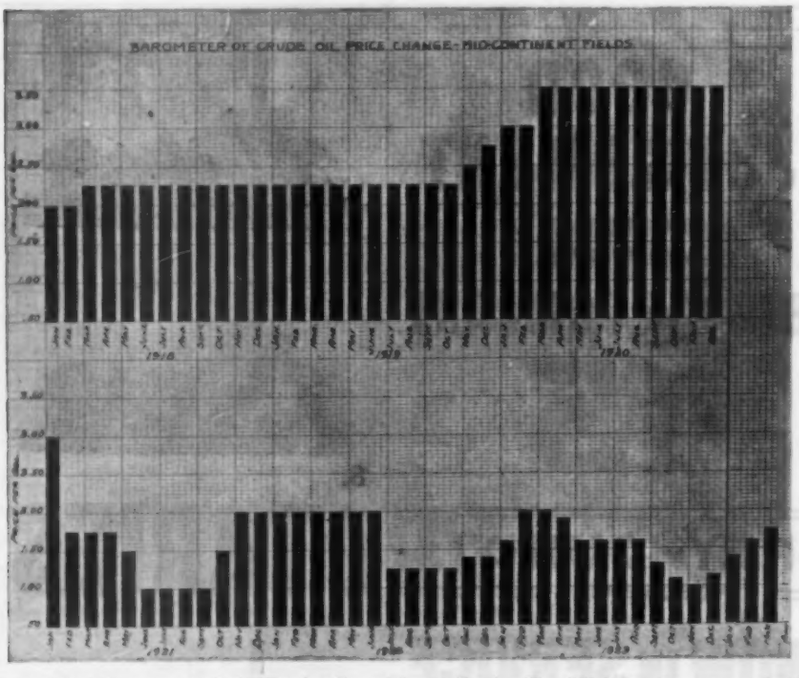

The statistical department of the Empire Companies at Bartlesville, Oklahoma, has prepared this interesting curve showing the trend of crude oil prices from 1918 down to and including the posted advance of March 8, 1924.

the estimates so far made for the United States are:

TABLE III

	Barrels
1908, D. T. Day, minimum	10,000,000,000
1908, D. T. Day, maximum	24,000,000,000
1915, Ralph Arnold	5,763,100,000
1920, David White	6,740,000,000

The life of certain of the light gravity oil fields of Mexico has received some attention from E. L. Doheny and the writer. The latter[25] as early as February 1921, from information furnished by several of his associates, predicted with remarkable accuracy the great slump in production in 1922, due to the inroads of salt water and the exhaustion of the pools. Eugene Stebinger[26] was the first to approximate the world's reserve; his figures in 1920 indicated a total of 43,005,000,000 barrels.

Advancement in Geologic Methods

A steady and revolutionizing advance in field and laboratory methods of geologic study has been made by the petroleum geologist, largely over the last two decades. This advance has been so marked as to warrant the statement that the oil industry has contributed as much to certain branches of geology as geology has contributed to the oil industry. The trend of this advance has, like the drilling of deeper and deeper wells, been away from surface geology to subsurface work.

A great mass of detailed data regarding underground conditions has been given to science which never would have been made available except through the drilling of the thousands of wells put down in the search for oil and gas. Furthermore, the exactions of the industry for accuracy and detail in observation and deduction has tended to raise the science of geology from the realm of generalities toward the plane of mathematical accuracy. The credit for this last effect must be shared with the mining industry. Now the terms, "economic geology" and "economic geologist," imply extreme accuracy as well as practical and commercial value. On the other hand, many of the most important contributions to the oil industry through geology have been made as a result of studies primarily undertaken for scientific purposes only.

At the beginning of the century, maps showing the general features of geology and structure were the only ones in common use. Edward Orton,[27] in 1889, was the first to use subsurface-shaded contours to show the structure of an oil-bearing formation, the Trenton limestone. The first contour-line subsurface oil map to be issued was that by W. T. Griswold,[28] topographer of the United States Geological Survey, in 1902, showing the Berea grit oil sand in the Cadiz Quadrangle, Ohio. C. W. Hayes, in his letter of transmittal, said: "I believe this paper marks a distinct advance in the methods of studying oil fields and of determining and delineating the structures of oil-bearing formations." Now we use similar maps of extreme accuracy to depict not only structures but variations in temperature and metamorphism as well as specific gravity and other characteristics of the oil in underground reservoirs.

Extremely detailed mapping both surface and subsurface, by perfected plane table and instrument methods are now in common use in the oil fields and are absolutely essential for good results in fields with low dips, like Oklahoma. For the development of the refinement of these methods we are largely indebted to the Oklahoma geologists. Accuracy in measurement of geologic sections, both subsurface and surface, with an accompanying detailed study of the composition and contents of the strata, have led to some remarkably valuable results.

The use of stereograms by C. H. Wegemann and K. C. Heald,[29] and large scale peg models of oil fields by R. P. McLaughlin and Roy Collom of the California State Mining Bureau, to show the details of underground geology in the oil fields, has been extremely useful in the education of the operators and the public.

Petroleum Geology's Debt to Paleontology

Just as geology is the foundation of the petroleum industry, so is paleontology the key to petroleum geology. To those of you who now glibly use formation names and deftly make detailed correlations of sands and strata from well to well and field to field without the direct use of paleontology, the writer would say: "It would not be possible without the pioneer work of the paleontologist." Credit and thanks are due to the paleontologists for working out the broad correlations and in many instances the minute details of stratigraphy upon which we base the expenditure of millions of dollars annually in development.

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In like manner, a close co-operation between the producing departments and geologists has resulted in the keeping of more and more detailed records of production, especially of individual wells, so that now the decline curves computed by the geologists are more accurate, and hence the estimates of reserves used for tax computation and many other purposes are more reliable. Many other improvements in the technology of oil development, such as the making of water shut offs, testing for water trouble, etc., may be ascribed to the influence of the geologist. J. O. Lewis and his associates are revolu-

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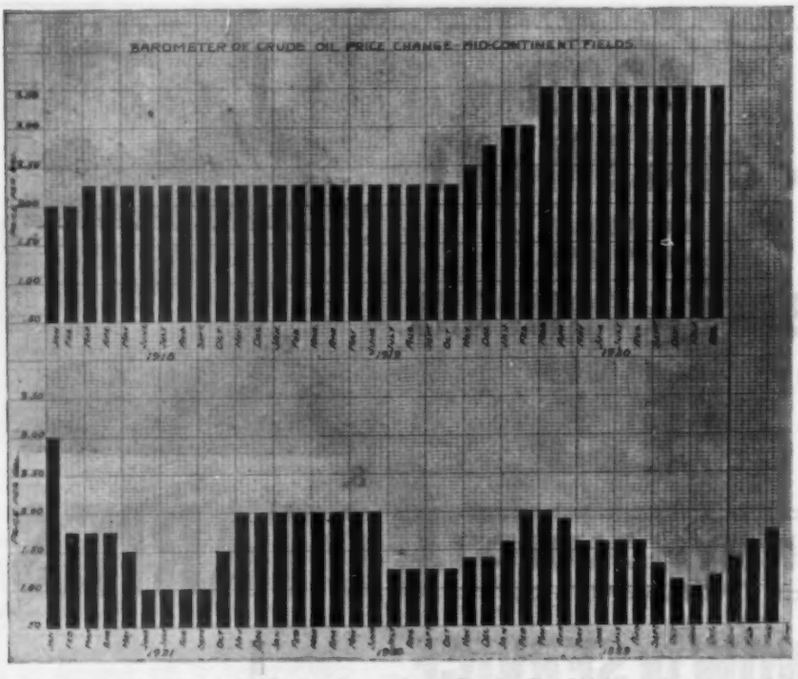

The statistical department of the Empire Companies at Bartlesville, Oklahoma, has prepared this interesting curve showing the trend of crude oil prices from 1918 down to and including the posted advance of March 8, 1924.

the estimates so far made for the United States are:

TABLE III

	Barrels
1908, D. T. Day, minimum	10,000,000,000
1908, D. T. Day, maximum	24,000,000,000
1915, Ralph Arnold	5,763,100,000
1920, David White	6,740,000,000

The life of certain of the light gravity oil fields of Mexico has received some attention from E. L. Doheny and the writer. The latter[25] as early as February 1921, from information furnished by several of his associates, predicted with remarkable accuracy the great slump in production in 1922, due to the inroads of salt water and the exhaustion of the pools. Eugene Stebinger[26] was the first to approximate the world's reserve; his figures in 1920 indicated a total of 43,005,000,000 barrels.

Advancement in Geologic Methods

A steady and revolutionizing advance in field and laboratory methods of geologic study has been made by the petroleum geologist, largely over the last two decades. This advance has been so marked as to warrant the statement that the oil industry has contributed as much to certain branches of geology as geology has contributed to the oil industry. The trend of this advance has, like the drilling of deeper and deeper wells, been away from surface geology to subsurface work.

A great mass of detailed data regarding underground conditions has been given to science which never would have been made available except through the drilling of the thousands of wells put down in the search for oil and gas. Furthermore, the exactions of the industry for accuracy and detail in observation and deduction has tended to raise the science of geology from the realm of generalities toward the plane of mathematical accuracy. The credit for this last effect must be shared with the mining industry. Now the terms, "economic geology" and "economic geologist," imply extreme accuracy as well as practical and commercial value. On the other hand, many of the most important contributions to the oil industry through geology have been made as a result of studies primarily undertaken for scientific purposes only.

At the beginning of the century, maps showing the general features of geology and structure were the only ones in common use. Edward Orton,[27] in 1889, was the first to use subsurface-shaded contours to show the structure of an oil-bearing formation, the Trenton limestone. The first contour-line subsurface oil map to be issued was that by W. T. Griswold,[28] topographer of the United States Geological Survey, in 1902, showing the Berea grit oil sand in the Cadiz Quadrangle, Ohio. C. W. Hayes, in his letter of transmittal, said: "I believe this paper marks a distinct advance in the methods of studying oil fields and of determining and delineating the structures of oil-bearing formations." Now we use similar maps of extreme accuracy to depict not only structures but variations in temperature and metamorphism as well as specific gravity and other characteristics of the oil in underground reservoirs.

Extremely detailed mapping both surface and subsurface, by perfected plane table and instrument methods are now in common use in the oil fields and are absolutely essential for good results in fields with low dips, like Oklahoma. For the development of the refinement of these methods we are largely indebted to the Oklahoma geologists. Accuracy in measurement of geologic sections, both subsurface and surface, with an accompanying detailed study of the composition and contents of the strata, have led to some remarkably valuable results.

The use of stereograms by C. H. Wegemann and K. C. Heald,[29] and large scale peg models of oil fields by R. P. McLaughlin and Roy Collom of the California State Mining Bureau, to show the details of underground geology in the oil fields, has been extremely useful in the education of the operators and the public.

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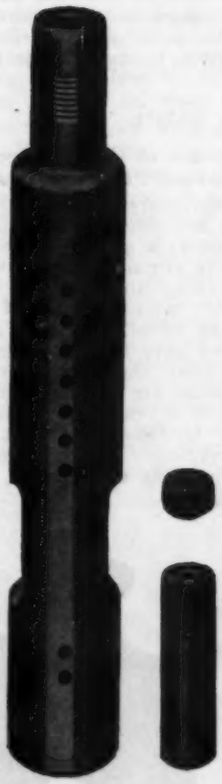
The distinctive Bridgeport features built into Bridgeport Prosser Sockets are in line with the Company's policy of better tools for the same price.



Bridgeport Prosser Sockets are made of mild steel subjected to a special heat treatment which gives greater strength and wearing qualities. They are accurately tested for hardness and toughness.

The "Button" or "knocking head" is made of very tough steel, case hardened and operates above the swivel. The purpose of the button is to eliminate sticking of the swivel due to battering.

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Prosser Socket

Bridgeport Prosser Sockets have an extra long neck to facilitate fishing operations. We make the shoulder with a fillet, thus eliminating the sharp corner above the neck and minimizing the danger of the neck cracking off. Sharp corners of the wrench square are eliminated, thus overcoming cracking. Edges coming in contact with the wire rope are champered to prevent wear on the wire.

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It explains and illustrates Bridgeport Service. Sent to anyone actively interested in the Oil Business.

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Rising Star, Texas				Stroud, Oklahoma

THE
BRIDGEPORT
MACHINE COMPANY

General Offices & Works WICHITA, KANSAS

Production of Petroleum

The figures given below for the States east of California, compiled from reports made to the Geological Survey by companies that operate gathering lines, are preliminary and show the quantity of petroleum transported from producing properties. Petroleum consumed on the leases and produced but not transported from the producing properties is not included in the preliminary figures. These items are given in the final annual statistics, which show all the oil brought to the surface. The figures for California are those reported by the Pacific Coast Office of the American Petroleum Institute and are preliminary. Final figures for California are those compiled by the California State Mining Bureau.

BY STATES
(Barrels of 42 U. S. Gallons)

	January, 1924 *		February, 1924			
State—	Total	Daily average	Total	Daily average	Jan.-Feb. 1924	Jan.-Feb. 1923
Arkansas	2,695,000	86,936	2,877,000	99,207	5,572,000	4,680.000
California	20,913,000	674,597	19,341,000	666,939	40,254,000	32,885,000
Colorado	5,500	177	7,700	266	13,200	13,100
Illinois	630,000	20,323	649,000	22,379	1,279,000	1,417,000
Indiana:						
Southwestern	52,000	1,677	55,000	1,897	107,000	131,000
Northeastern	18,000	581	22,000	758	40,000	37,000
Total Indiana	70,000	2,258	77,000	2,655	147,000	168,000
Kansas	2,101,000	67,774	2,106,000	72,621	4,207,000	4,572,000
Kentucky	586,400	18,916	594,300	20,493	1,180,700	1,390,600
Louisiana:						
Gulf Coast	185,000	5,968	168,000	5,793	353,000	353,000
Rest of State	1,528,000	49,290	1,421,000	49,000	2,949,000	4,070,000
Total Louisiana	1,713,000	55,258	1,589,000	54,793	3,302,000	4,423,000
Montana	151,000	4,871	141,000	4,862	292,000	427,000
New York	102,000	3,290	101,000	3,483	203,000	164,000
Ohio:						
Cent. & Eastern	371,000	11,968	361,000	12,448	732,000	759,000
Northwestern	144,000	4,645	159,000	5,483	303,000	316,000
Total hio	515,000	16,613	520,000	17,931	1,035,000	1,075,000
Oklahoma:						
Osage County	2,979,000	96,097	.....	.....	.....	6,671,000
Rest of State	8,758,000	282,532	.....	.....	.....	17,815,000
Total Okla.	11,737,000	378,629	11,880,000	409,648	23,617,000	24,486,000
Pennsylvania	554,000	17,871	558,000	19,241	1,112,000	1,141,000
Tennessee	600	19	700	24	1,300	1,400
Texas:						
Gulf Coast	2,066,000	66,645	2,192,000	75,586	4,258,000	5,291,000
Rest of State	7,913,000	255,258	8,102,000	279,379	16,015,000	11,272,000
Total Texas	9,979,000	321,903	10,294,000	354,965	20,273,000	16,563,000
West Virginia	487,000	15,710	490,000	16,897	977,000	989,000
Wyoming:						
Salt Creek	3,487,000	112,484	3,072,000	105,931	6,559,000	4,600,000
Rest of State	728,500	23,500	729,300	25,148	1,457,800	1,075,900
Total Wyoming	4,215,500	135,984	3,801,300	131,079	8,016,800	5,675,900
	56,455,000	1,821,129	55,027,000	1,897,483	111,482,000	100,071,000

*Revised.

BY FIELDS
(Barrels of 42 U. S. Gallons)

	January, 1924 *		February, 1924			
Field—	Total	Daily average	Total	Daily average	Jan.-Feb. 1924	Jan.-Feb. 1923
Appalachian	2,101,000	67,744	2,105,000	72,586	4,206,000	4,445,000
Lima-Indiana	162,000	5,226	181,000	6,241	343,000	353,000
Ill. & S. W. Ind	682,000	22,000	704,000	24,276	1,386,000	1,548,000
Mid-Continent	25,974,000	837,887	26,386,000	909,855	52,360,000	49,080,000
Gulf Coast	2,251,000	72,613	2,360,000	81,379	4,611,000	5,644,000
Rocky Mountain	4,372,000	141,032	3,950,000	136,207	8,322,000	6,116,000
California	20,913,000	674,597	19,341,000	666,939	40,254,000	32,885,000
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*Revised.

tionizing the recovery methods in some of the Appalachian fields.

Influence of Petroleum Geologists On Business

Without appearing to be prudish, may we not say that the influence of the petroleum geologist on the business standards of the industry has been good? Somehow a scientific training tends to make the student revere the ethical ideals a little more than does the ordinary business training. As a result it can be truthfully said that few geologists make good business men. The tendency of the geologist to state the facts, no matter what the result, has given him a high rating for dependability, even if not for good judgment in every case. The fact that corporation control, as related to oil and mining in most of our states, is based primarily on the work of engineers and geologists, speaks volumes for the dependability of the men of these professions. The standards suggested by F. G. Clapp in his "Ethics of an Oil Geologist," and those adopted by the American Institute of Mining Engineers and the American Association of Petroleum Geologists have been so high as to place our profession among the leaders in business morals.

Furthermore, our profession has had a beneficial influence in systematizing and standardizing many lines in the oil and gas industry, such as the keeping of records, accounting, computing of depletion, depreciation, amortization, the segregation of capital and operating expense accounts, etc. And occasionally a geologist makes a good oil-company executive.

Exploration Work and "Wildcatting"

Whereas the search for oil at the beginning of the period we are discussing was carried on in a small, unsystematic way, largely by local groups organized solely for making a single test, today we find exploration as highly systematized as any branch of the oil industry. The influence of geologists in this regard has greatly reduced the hazard of test drilling. It must be admitted that our British brethren took the lead in systematic exploration, especially in foreign lands, long before we attempted it, so that to them we owe some of our ideas regarding exploration. The digging of test trenches and pits and the boring of shallow holes for the discovery of favorable structures or direct evidence of oil, are among their contributions to our technique.

With the entry of the Standard group of oil companies into the production of oil, beginning about 16 years ago, exploration took on a new impetus, and up to the present time has maintained a strenuous pace. Among the larger exploration activities under the direction of geologists might be mentioned those of the general Asphalt Company and subsidiaries in Trinidad and Venezuela, begun under the direction of A. C. Veatch in 1911, and later continued by the writer with 40 associates; that of the Standard Oil Company of New York, in China in 1914-16, under the direction of G. D. Louderback; that in Kansas in 1916 by the H. L. Doherty interests, employing 200 geologists in a "drive" for new oil fields; and still later the extensive activities in foreign fields of the Standard Oil Company of New Jersey under C. F. Bowen and those of the Sinclair Oil Company, under A. C. Veatch, who for several years following 1912 directed the exploration work of the Lord Cowdray interests of London. The exploration successes of E. DeGolyer and F. Julius Fohs have shown what remunerative results can come from a combination of geologic knowledge and good business judgment. The pioneering work of the United States Geological Survey and several of the state surveys has also been influential in opening up many new fields.

Volumes could be written regarding this phase of the petroleum geologist's work—probably the most important phase, if you please—of the hardships endured, difficulties overcome, and the dangers braved. Yet with all these trials and tribulations it has had its reward in the enjoyment of opening the trails of development and progress and of solving the many problems of virgin territories. Let us bow our heads for a moment in respectful remembrance of those of our associates who have gone down on the "firing line" in far off lands—for men like Walter Knobbs, who died in Venezuela in 1912 and G. S. Rogers, who was drowned in Columbia in 1920—as true heroes as any who ever died for a righteous cause.

(To be continued next issue)

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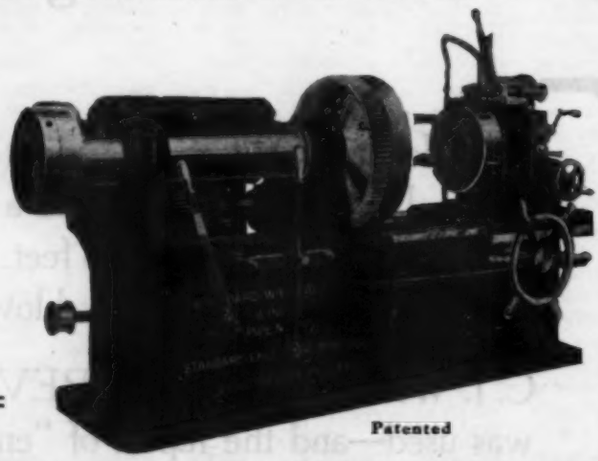

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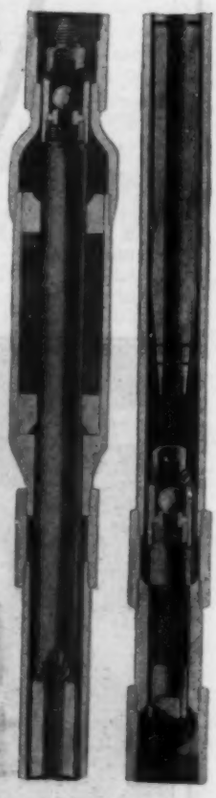

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Economic Results From Core Drilling

Method developed by geologists becoming more necessary to practical operation

*By R. P. McLaughlin**

Before American Association of Petroleum Geologists

RECENT years have witnessed many improvements in oil well drilling machinery and tools. Most of these improvements were designed either to drill wells deeper or more quickly, and were perfected by men engaged in the mechanical work of drilling. The core drill is one of the first successful tools to have been developed by the geologist. The stages of development of the core drill have already been thoroughly described by J. E. Elliott[1], who introduced and perfected it.

The purpose of this paper is to review some of the accomplishments of the core drill in reducing drilling costs and hastening production.

The benefits of the core drill to the oil industry have been greatest where it has been used under supervision of the geologist, and further demonstrates the value of the geologist in production operations.

A review of core drilling results will possibly be assisted by presentation of the following photographs showing the construction of a drill and its method of assembly.

The core drill has come into general use in California oil fields during the past three years and a comparison of present conditions with those existing prior to its introduction is therefore afforded within a short period of time. During this time a great many wells have been drilled and final results demonstrated.

Early development of the Huntington Beach field is one of the best examples of the handicap under which the oil industry labored before the introduction of the core drill. The first well in this field was brought in as a producer on May 24, 1920, and many other wells were immediately started. One year after the discovery date, there were 92 deep wells. However, only twelve wells were actually producing, although the time necessary to drill a well was only about four months. During the first half of the year 1921 the field produced more water than oil (623,192 barrels of water as against 612,469 barrels of oil) while during the latter half of the year after core drilling began and underground conditions were better understood, only about two per cent of the total fluid was water (1,975,757 barrels of oil, 33,747 barrels of water). Comparison of these figures illustrates the unsatisfactory conditions of early development more eloquently than words could.

The reason why most of the wells were producing water instead of oil was because of the fact that little or nothing was known about the underground geology. A student of the ground surface reveals nothing except the possible existence of an anticlinal fold. There is no surface evidence indicating the degree of dip, the thickness of beds or their sequence.

The writer made a detailed examination of the field in July 1921 and obtained all the evidence afforded by well logs. With the logs of about one hundred wells available, only three finally furnished information which could be used as a clue in determining the underground geologic conditions.

The first producing well, situated near the apex of the anticline, had fortunately been completed in such a manner as to yield oil free of water. Subsequent drilling with rotary tools, down the north flank, had disclosed the presence of oil sands. The shallowest of these showings were at first presumed to be correlative with the first sand recorded in the discovery well and such a correlation indicated a steep dip. However, none of these correlations could be extended to all the wells and satisfactorily explain their conditions.

After applying and discarding all the various theories based on correlation of oil sands it was finally decided to attempt to correlate water bearing strata. Positive evidence that any particular stratum carried water could be found at only three wells. These wells had been plugged by stages upward from the bottom, and pumped after each short plug was placed, until clean oil was produced. Through these three established points a plane was projected to intersect the other wells, on the assumption that the three points were within a single stratum. Much subsequent drilling proceeded upon this theoretical correlation and after several months the theory was demonstrated to be approximately correct. Still later the sequence of oil bearing and water bearing strata was determined.

The solution of this problem was an extremely entertaining form of mental exercise and the subsequent demonstration of the correctness of the theory was gratifying. However, the outstanding feature to be emphasized is that the development of the field had been delayed for at least a year and operators had needlessly expended many hundreds of thousands of dollars for casing and for plugging, deepening or redrilling operations.

The Huntington Beach field is not the only example of expense and delay before the introduction of the core drill. In the Elk Hills field active development work was being carried on early in the year 1921. The depth to producing oil sands and the degree of dip were at many places only approximately known. In drilling a well it was therefore frequently necessary to cement a string of casing at a depth assumed to be below the water sands and above the oil sands. If further drilling disclosed the presence of water, a second and smaller string of casing had to be cemented and the test repeated. Sometimes it was even necessary to land a third string of casing. Such procedure delayed the completion of a well, greatly increased the cost of casing and also reduced the diameter of the well so that producing or drilling operations became extremely difficult.

The accompanying diagram (Fig. 1) shows the casing actually used at four wells in the Elk Hills. The wells are here numbered in the order of their commencement dates. The drilling time is shown at the bottom of each log and also the approximate cost of each well.

The reduced cost of well No. 3 is due to economy in casing and time which was possible after obtaining exact information of underground conditions. At the present time the core drill gives the necessary information while the

Coring Shoe, inner barrel in three sections, and core extractor

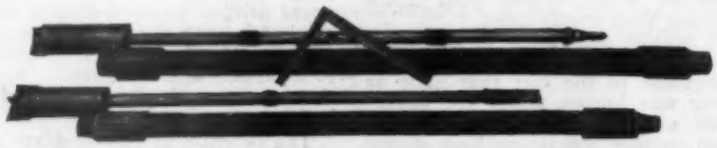
Coring Shoe, showing arrangement of teeth and circulation holes

*Former Oil and Gas Supervisor for California and now vice president of the Elliott Core Drilling Company, Los Angeles, Cal.

[1]Bulletin A. A. P. G. Vol VII, No. 3, pp. 250-262.

first well in a group is being drilled. The first, second and fourth wells could have been drilled about as cheaply and quickly as well No. 3 was, if the core drill had then been available. In other words, core drilling would have effected a saving of at least $30,000 or 50 per cent at each well. The present procedure also brings the wells to production from sixty to ninety days earlier than was formerly possible.

The Santa Fe Springs field is a distinct contrast to the slow and unsatisfactory development at Huntington Beach, Santa Fe Springs was developed about one year later than Huntington Beach and the core drill was therefore available.



Core Drills, showing method of attaching outer and inner barrels to cutting shoe

The geological conditions at Santa Fe Springs are at least as difficult to operate against as those at Huntington Beach and probably even more difficult. Within about a year after the first important well came in, there were seventy producing wells and the amount of water was less than one per cent of the total fluid.

In the discovery of new fields, the core drill has already some accomplishments to its credit. The new Dominguez Hill field, a few miles south of Los Angeles, now embraces several producing wells and bids fair to become an important field. The general locality, or rather the range of hills, has for many years been recognized by geologists as possible oil bearing territory and a considerable number of unsuccessful wildcat wells have been drilled and abandoned. The first well to produce oil is the "Callender" well, belonging to the Union Oil Company. The results at this well indicate that some of the earlier wells have failed to recognize oil sand when penetrated by the rotary bit and immediately sealed with mud.

At the Callender well about fifty cores were taken and over thirty of them showed oil although neither oil nor gas showed in the drilling mud. The gravity of the oil is light (32° B.) which probably accounts for its failure to show in the drilling mud. Had there been no cores taken the presence of oil might have been discovered only incidentally or accidentally during some manipulation of the well, or it might easily have entirely escaped detection, as it actually did in two other wells drilled several years ago, in the same locality.

Prospecting to the west of Santa Fe Springs has now been carried on for more than a year. Four deep wells have been drilled and some encouraging results obtained. It is yet too early to say whether or not a producing field will be developed but the core drill has disclosed practically all the definite information now available. Consideration of the manner in which the core drill has been used in this area affords some information and suggestion for its use in similar wildcat areas.

Thus far there has not been any bed or stratum which can be definitely correlated from well to well over the total distance of some three miles. The entire area, as at Santa Fe Springs, is covered with loose, unconsolidated sand and gravel (Fernando), having a thickness of from one thousand to twelve hundred feet. Below the Fernando, there is reported a zone about fourteen hundred feet thick in which blue shale commonly occurs, then about a thousand feet in which brown sandy shale predominates. A zone of hard sand about four hundred feet thick is then reported by some observers. None of the zones have very marked or pronounced characteristics. Oil sand has been found in a number of cores taken at one well. At one or two of the wells, it is reported that there is a variation in the salt content of water found in cores. The drilling in this locality has been under the close scrutiny of several competent geologists.

Study of this "wildcat" area and others of somewhat similar nature leads to the conclusion that the plan or schedule of coring at a well is one of the most important features. The geologist should have practically complete and final authority in determining where cores are to be taken. If the mechanical branch of the drilling department is apprehensive of undue expense and delay that feeling may be met by setting the limit to the number of cores to be taken and still leaving the geologist with the authority and responsibility of determining where his allotment of cores shall be used. Experience now indicates that at least fifty cores should be provided for at a wildcat well and that one hundred cores is a liberal maximum limit.

An arbitrary schedule of coring at fixed intervals of depth is not likely to serve the best end. Cores will be most useful if taken at points where changes in drilling conditions indicate a change in formation. Some of these changed conditions may occur at depths where the mechanical department will be loathe to stop drilling but where a core will be most valuable. In order to best decide where there have been changes in rock formation, the geologist or his assistant should be almost constantly at the well to observe any change in drilling conditions.

Results now show the core drill obtains information at a wildcat well where the rotary drill merely makes hole and usually does not obtain information on underground conditions. A more direct effect of the core drill is that it reduces the cost of a wildcat well by eliminating casing which would otherwise be necessary in testing any zone of strata. Formerly it was necessary to cement a string of casing above any stratum which was suspected of carrying oil and then bail the well for a test. Such tests could only be made two or three times during drilling progress because each test reduced the diameter of the well, and soon left insufficient space for drilling tools. It is now unnecessary to test formations merely upon the suspicion that they are oil bearing. If frequent cores have no oil, a further test is usually not justified.

A wildcat well in one of the above mentioned areas was recently drilled to a depth of five thousand feet at a cost of about $60,000 as compared to from $150,000 or $200,000 previously spent on test wells of similar depth. The saving was due to the fact that only one thousand feet of casing was used. About fifty cores were taken and it is practically certain that no oil bearing formations have been overlooked. The only casing used was fifteen and one-half inch, cemented at a depth of about 1000 feet. As drilling progressed, the diameter of the hole and drill pipe was reduced, Six inch drill pipe was used to a depth of 4200 feet and thereafter four inch drill pipe was used. The diameter of the hole was 12 inches to a depth of 3700 feet, nine and three-quarter inches to 4200 feet and seven and five-eighths inches to 4500 feet.

The average length of cores taken at the well was 50 inches, those at shallow depths averaged 66 inches and at the bottom 32 inches. The decrease in length of cores in this instance is due to the fact that increase of length and decrease of diameter of drill pipe increases the hazard of its twisting off and therefore the core barrel has to be more carefully used at great depths. Cores were obtained from about 90 per cent of the attempts.

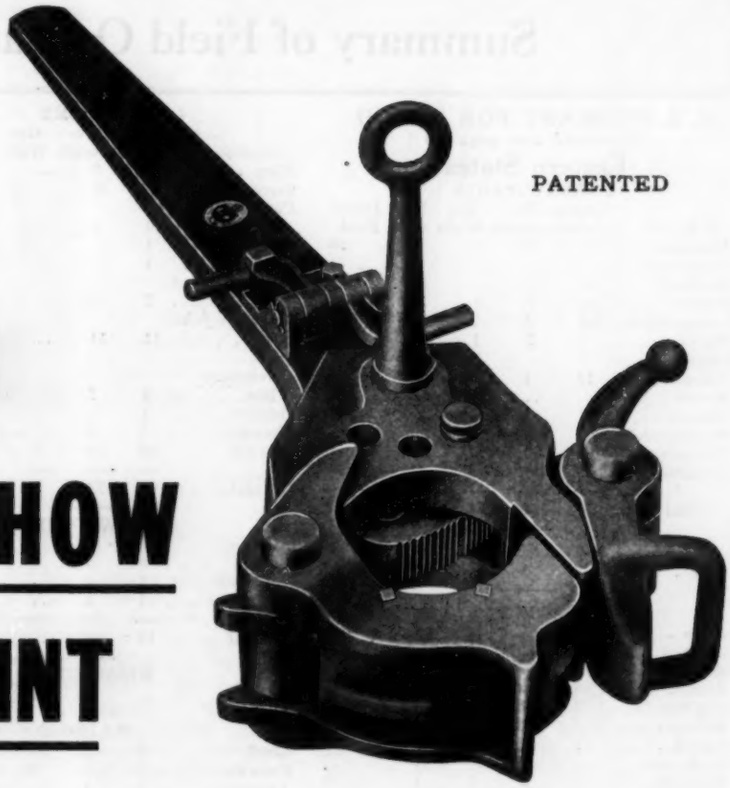
The cost of coring is a feature which has not been given the attention it deserves, by most operators who have used it. The principal single item of coring is the time required to carry out the operation. From two to three hours are required to run the tools into the well and about the same amount of time is required to remove them. The actual coring operation requires from one to two hours and therefore a total of about eight hours is consumed for each complete operation. Time is frequently charged for by drilling contractors at the rate of $10 to $15 per hour. It is therefore important to reduce the number of fruitless runs to the minimum and the correct cost of coring operations must be accounted for upon a basis which includes the misses.

The cost of the coring operation itself, as indicated by quotations of concerns specializing in the work, varies from $75 to $100 per core actually obtained.

Upon the above mentioned basis the average cost per core is $189 if 90 per

(Continued on page 41)

Core Barrels completely assembled and ready to operate



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Say you saw it in The Oil Weekly

Summary of Field Operations for March

U. S. SUMMARY FOR MARCH

(Continued from page 14)

Eastern States

PENNSYLVANIA

County—	Completions	Producers	Gas Wells	Failures	Initial Prod.
Allegheny	6	3	1	2	28
Armstrong	..	..	..	..	....
Bradford	33	31	..	2	143
Butler	12	9	1	2	36
Center-Middle	4	2	..	2	6
Clarion	4	3	1	..	6
Forest	1	..	1	..	....
Greene	19	1	14	4	5
Mercer	..	..	..	..	....
Warren	1	1	..	..	40
Washington	1	..	1	..	....
Tidioute	1	1	..	..	100
Venango	13	11	2	..	28
Total	95	62	21	12	392

TENNESSEE

Clay	2	1	..	1	10

OHIO

Allen	3	2	..	1	17
Ashland	4	..	1	3	..
Athens	7	..	5	2	..
Attawa	4	4	..	..	82
Auglaize	2	1	..	1	2
Belmont	2	1	..	1	2
Carrol	1	1	..	..	2
Coshocton	..	..	..	..	..
Fairfield	4	2	1	1	8
Hancock	..	..	..	..	..
Hardin	4	..	4	..	..
Harrison	..	..	..	..	..
Hocking	6	2	2	2	12
Holmes	4	1	3	..	60
Jackson	4	..	3	1	..
Knox	7	2	2	3	10
Licking	17	9	6	2	80
Lucas	1	..	1	..	..
Lorain	3	..	3	..	..
Mahoming	1	1	..	..	1
Medina	6	1	4	1	..
Meigs	2	1	1	..	10
Mercer	5	2	2	1	4
Morgan	7	6	..	1	123
Muskingum	4	2	1	1	8
Noble	7	2	1	4	6
Perry	2	1	1	..	3
Richard	2	..	2	..	..
Richland	2	..	2	..	..
Sandusky	2	2	..	..	10
Seneca	1	1	..	..	400
Washington	17	9	2	6	47
Wayne	10	2	7	1	130
Wood	7	6	..	1	167
Van Wert	1	1	..	..	8
Vinton	1	..	1	..	..
Total	150	62	55	32	1,192

WEST VIRGINIA

Boone	1	1	..	..	15
Braxton	5	1	2	2	75
Cabell	5	..	5	..	..
Calhoun	12	2	8	2	15
Doddridge	11	3	5	3	30
Gilmer	15	..	12	3	..
Hancock	1	..	1	..	..
Harrison	11	1	8	2	10
Kanawha	6	2	4	..	11
Lewis	7	1	5	1	5
Lincoln	5	..	5	..	..
Marion	7	3	1	3	13
Marshall	4	3	1	..	13
Monongalia	1	1	..	..	5
Pleasants	3	2	..	1	4
Putnam	1	..	1	..	..
Ritchie	26	7	12	7	119
Roane	10	4	3	3	35
Tyler	1	..	..	1	..
Wetzel	7	2	3	2	7
Wirt	2	1	..	1	2
Wood	9	8	..	1	55
Total	150	42	76	32	414

KENTUCKY

County—	Completions	Producers	Gas Wells	Failures	Initial Prod.
Allen	12	9	..	3	163
Barren	23	19	..	4	144
Cumberland-Monroe	10	6	..	4	1,222
Estill	1	..	..	1	..
Hopkins	1	..	..	1	..
Johnson-Magoffin	7	7	..	..	49
Lawrence-Johnson	11	11	..	..	597
Lee	1	1	..	..	7
Owensboro Dist.	6	5	..	1	80
Owsley	1	..	1	..	..
Simpson	3	2	..	1	65
Warren	16	12	1	3	285
Total	92	72	2	18	2,612

NEW YORK

Allegheny	15	15	..	..	59
Bolivar	2	2	..	..	45
Wellsville	1	1	..	..	10
Whiteville	1	1	..	..	10
Total	19	19	..	..	124

MISSISSIPPI

Pike	..	..	..	..	....

ILLINOIS

Clark	2	2	..	..	100
Crawford	1	1	..	..	2
Lawrence	1	1	..	..	4
Wabash	1	..	..	1	..
Total	5	4	..	1	106

INDIANA

Delaware	1	1	..	..	10
Gibson	3	1	..	2	120
Jay	8	6	..	2	538
Total	12	8	..	4	668

Texas

CENTRAL TEXAS

Field—	Completions	Producers	Failures	Init. Prod.	Monthly Prod.
Corsicana-Powell	42	34	8	79,730	3,876,800
Mexia-Currie-Richland	1	..	1	....	1,153,510
Stephens County	21	17	4	*2,215	607,665
Desdemona-Gorman	8	6	2	245	249,520
Ranger-Eastland	12	7	5	†1,300	239,785
Moran-Shakelford County	4	3	1	360	117,305
Palo Pinto County-Strawn	4	1	3	‡	27,625
Mitchell County	1	1	..	180	22,540
Brown County	2	1	1	§	10,915
Reagan County	..	..	..	....	5,675
Coleman County	..	..	..	....	4,375
Thrall-Williamson County	..	..	..	....	2,170
Wildcats	4	1	3	30	.....
Totals	99	71	28	84,060	6,317,885

*Includes 15,000,000 ft. gas.
†Includes 4,000,000 ft. gas.
‡Includes 3,000,000 ft. gas.
§Includes 3,000,000 ft. gas.

NORTH TEXAS

Archer County	154	110	44	26,470	787,465
Burkburnett	17	9	8	380	657,730
Electra	36	21	15	1,542	582,335
Young County	10	6	4	350	133,210
K-M-A	8	2	6	500	41,760
Iowa Park	18	9	9	1,118	40,890
Carson County	..	..	..	....	18,260
Clay County-Petrolia	1	..	1	....	9,300
Jack County	..	..	..	....	1,085
Wildcats	4	..	4	....	.....
Totals	248	157	91	30,360	2,272,035

GULF COAST

Field—	Completions	Producers	Gas Wells	Failures	Init. Prod.	Monthly Prod.
Barbers Hill	1	1	..	..	1,000	8,060
Batson	6	6	..	..	80	31,403
Big Hill	1	..	..	1	....	620
Blue Ridge	1	..	..	1	....	20,956
Damond Md.	..	..	..	..	....	50,716
Dayton	..	..	..	..	....	1,015
Goose Creek	9	6	..	3	585	416,516
High Island	..	..	..	..	....	651
Hockley	..	..	..	..	....	930
Hull	19	14	..	5	19,310	775,465
Humble	..	..	..	..	....	143,685
Markham	..	..	..	..	....	2,511
Nacogdoches	..	..	..	..	....	3,130
Orange	15	11	..	4	4,895	310,992
Pierce Jct.	..	..	..	..	....	18,042
Richmond	2	1	..	1	60	6,045
Saratoga	..	..	..	..	....	47,337
Sour Lake	5	4	..	1	150	147,715
Spindle Top	2	2	..	..	140	27,466
Stratton Ridge	..	..	..	..	....	1,302
W. Columbia	..	..	..	..	....	418,376
Wharton Co.	1	..	..	1	....	.....
Wildcats	..	..	..	..	....	.....
Totals	62	45	..	17	35,220	2,303,933

Oklahoma

MONTHLY PRODUCTION BY FIELDS

Field—	Barrels
Burbank	2,918,439
Bristow	1,544,234
Cushing	771,125
Duncan and Walters	308,636
Healdton	505,548
Hewitt	786,470
Okmulgee	612,343
Osage (outside Burbank)	952,258
Tonkawa	1,165,538
Wewoka	301,010
Other fields	2,710,020
Total	12,575,621

County—	Completions	Producers	Gas Wells	Failures	Initial Prod.
Beckham	5	2	..	3	475
Caddo	2	1	..	1	75
Carter	35	27	2	6	6,134
Creek	28	21	2	5	5,122
Garfield	4	1	1	2	60
Garvin	2	..	..	2	.....
Grady	6	..	2	4	.....
Grant	1	..	..	1	.....
Hughes	2	2	..	..	824
Jefferson	2	..	..	2	.....
Kay	14	6	3	5	1,416
Lincoln	2	..	1	1	.....
McIntosh	2	..	..	2	.....
Marshall	1	..	..	1	.....
Muskogee	2	..	..	2	.....
Noble	15	14	1	..	2,488
Okfuskee	12	5	2	5	584
Oklahoma	1	..	..	1	.....
Okmulgee	47	23	6	18	2,420
Osage	109	100	3	6	71,165
Pawnee	9	5	..	4	428
Payne	2	..	1	1	.....
Pontotoc	1	1	..	..	25
Roger Mills	1	..	..	1	.....
Seminole	9	8	..	1	5,329
Stephens	21	11	5	5	336
Tillman	1	..	..	1	.....
Tulsa	12	9	1	2	1,903
Waggoner	5	2	..	3	50
Totals	353	238	30	85	98,834

Kansas

Eldorado	517,080
Greenwood	493,600
Fox-Bush	185,101
Elbing and Peabody	304,544
Blankenship	110,577
Augusta and Douglas	110,236
Florence and Covert	89,063
Leon and Weaver	38,620
Other fields	318,060
Total	2,166,881

Economic Results from Core Drilling

(Continued from page 38)

cent of the runs are successful and is $260 if only 50 per cent of the runs are successful. The latter figure (50 per cent) for successful runs is found to be above the average obtained by drillers who do not specialize in coring.

The simplicity of design of the core drill sometimes leads to the conclusion that the process of core drilling is equally simple. It is found, however, that the human element is a very important feature. Drillers, who specialize in the work, get far better and more uniform results than those obtained by drillers who only occasionally run a core barrel. This diffrrence is illustrated by comparison of results obtained in one field by a large oil company taking its own cores and by a drilling company which specializes in coring. The average length of cores obtained by the oil company's drillers was 9 inches as against 26 inches by the special core drillers. The figures on unsuccessful runs by the oil company are not available but would probably show an equally wide discrepancy.

It is difficult to accurately express the difference in value of systems which get short cores as against those which obtain long cores but it is quite evident that long samples are far more valuable than short ones. In the case where only nine inch cores were obtained, the general operating results were not greatly superior to those obtained prior to the introduction of core drilling.

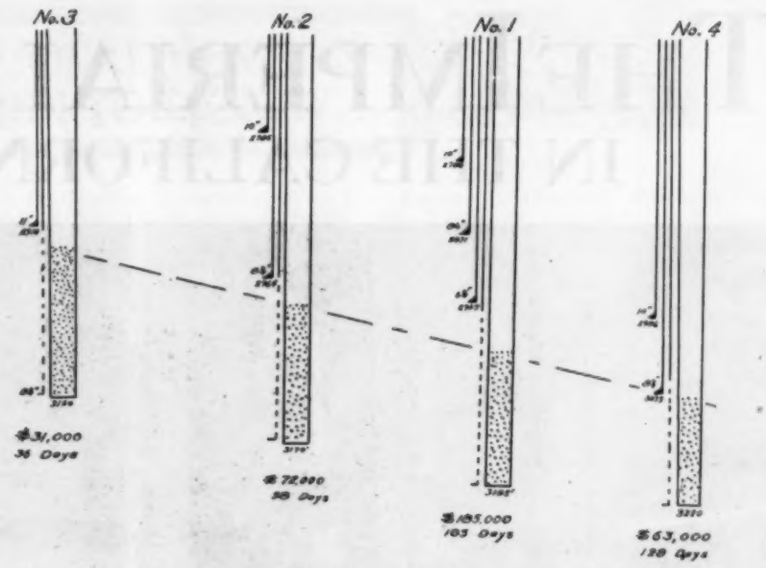


Fig. 1.—Four wells in Elk Hills, giving comparison of cost and drilling time

The diamond drill is being tried in various oil fields and may not be developed to a commercially useful basis, but in California fields it has not yet been successful. The hardness of the rocks of a locality will probably be the determining factor. In California fields about ninety per cent of the rock penetrated is soft enough to be cut readily by the steel bits in ordinary use. It would frequently be desirable to drill more rapidly through, or to take complete core samples from, the hard streaks of rock but it seems somewhat doubtful that a radical change in drilling machinery is now justified. The average practice now seems to be dictated by conditions which will dig quickly through comparatively soft rocks and at the same time readily dispose of the cuttings in the form of mud. The present form of core drill will readily stand up against the hardest formations which the fish-tail bit will cut and furthermore frequently takes satisfactory cores in formations which are so hard that roller bits and disc bits are necessary. Most of the unsuccessful attempts to take cores are now caused by formations which are so hard that they wear out or flatten the cutting teeth or by formations which are brittle and will not remain in the barrel after being cut. Until general operating conditions demand or justify drilling machinery which will handle diamond bits, it would seem that the present form of core drill is sufficient even though it cannot always take cores in hard rock or brittle strata.

The samples or cores now taken yield qualitative results only, that is, a core simply shows the presence or absence of oil. The productiveness of a given sand probably depends upon such factors as gas pressure and fluidity of the oil as well as upon the degree of saturation. At the present time only qualitative tests are made by putting a fragment of core into a bottle of ether and observing the degree of discoloration. It is not certain that further tests are justified but on the other hand it will not be known that they are useless until considerable laboratory research has been directed along this line. It may be that tests of cores can be devised which will indicate the productiveness of the formations encountered. Present practice detects the variations in salt content of water in cores and the more important testing for oil content seems to be the next logical step.

Microscopic studies of strata are becoming of greater importance and in order to be useful the samples must be carefully taken at accurately known depths and preserved in good condition. The core drill meets these requirements and many samples are now available for comparison and study which may be expected to further advance oil development.

Kansas

County—	Completions	Producers	Gas Wells	Failures	Initial Prod.
Elk	9	3	4	2	165
Greenwood	28	23	1	4	2,490
Lyon	1	..	..	1	.....
Marion	1	..	..	1	.....
Osage	2	..	..	2	.....
Russell	1	1	..	..	290
Butler	5	1	..	4	35
Cowley	1	..	..	1	.....
Totals	48	28	5	15	2,980

Arkansas

Field—	Completions	Producers	Gas Wells	Failures	Init. Prod.	Monthly Prod.
El Dorado	1	1	..	..	15	431,272
El Dorado (East Field)	1	1	..	..	150	*
Irma	1	..	..	1	....	28,551
Smackover	109	99	5	5	22,095	3,150,561
Stephens	7	7	..	..	125	77,872
Wildcats	1	..	..	1	....	.....
Total	120	108	5	7	22,385	3,688,256

*El Dorado and El Dorado (East field) production figured together.

Louisiana

Field—	Completions	Producers	Gas Wells	Failures	Init. Prod.	Monthly Prod.
Anse La Butte	..	..	..	..	....	589
Bellevue	10	9	..	1	240	176,824
Bull Bayou	..	..	..	..	....	168,981
Caddo	1	..	..	1	....	321,811
Cotton Valley	3	..	3	..	....	.....
Edgerly	1	1	..	..	2,250	14,601
Elm Grove	1	..	1	..	....	31,186
Evangeline	..	..	..	..	....	16,523
Haynesville	..	..	..	..	....	604,097
Homer	..	..	..	..	....	257,269
Monroe	10	..	10	..	....	.....
Oakland	..	..	..	..	....	.....
Sarepta	..	..	..	..	....	.....
Vinton	4	4	..	..	290	160,580
Wildcats	3	..	3	..	....	.....
Totals	33	14	17	2	2,780	1,752,461

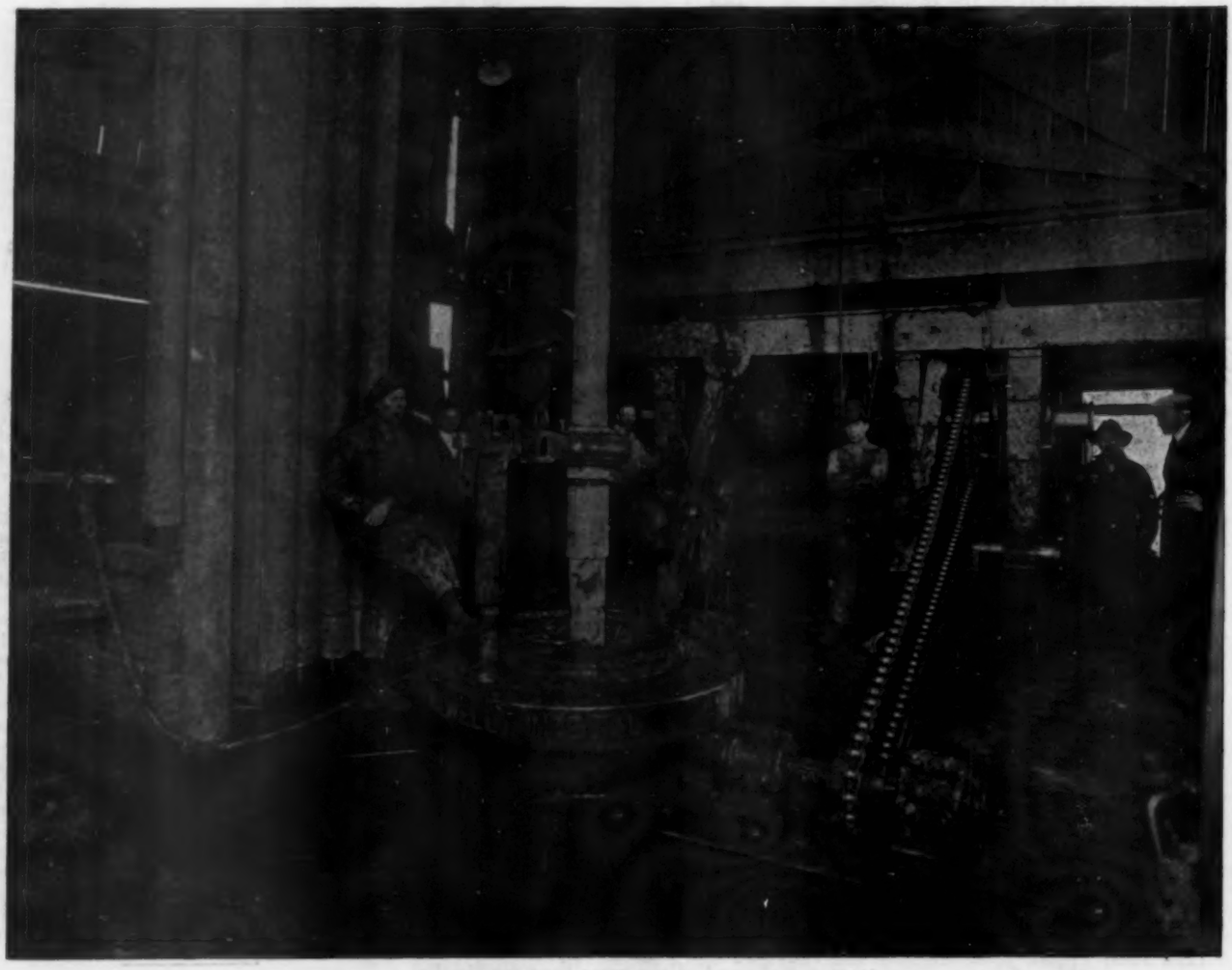
New Mexico Structure Has Real Oil Producer

Santa Fe, N. M., March 27.—Mid-West Refining Company's No. 7 well on the Hogback structure in the Navajo reservation, northwest New Mexico, is in and is rated at better than 1,000 barrels of 61 gravity oil from the Dakota sand at 647 feet. This is the largest well yet completed in the state but opens up no additional territory being within the proven limits.

Southwestern Geologists Elect Hull New President

At a luncheon held Thursday noon at the Rice Hotel, the Southwestern Geologists Association elected officers for the new year. J. P. D. Hull of Shreveport was chosen president; V. V. Waite of Dallas, vice president; G. Stathers of Shreveport, treasurer and W. Earl Hopper, Shreveport, secretary.

THE IMPERIAL ROTARY
IN THE CALIFORNIA FIELD



The above illustration is an actual photograph of an "Oilwell" Imperial Rotary in the California Field "making up" tool joints.

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Say you saw it in The Oil Weekly

PERSONAL MENTION-MEN YOU KNOW

H. H. Cannon has resigned his position as director and chief engineer with C. C. Julian Petroleum Corporation to engage in business for himself in Los Angeles, California. Before going with the Julian organization Mr. Cannon was connected with the General Petroleum Corporation and his activities covered a wide field in designing, constructing and operating departments.

Tom McKinney, scout and lease man for the Roxana Petroleum Corporation in the Wichita Falls district, has been transferred to Amarillo for several months to watch developments in the Panhandle district of Texas.

Walter Watson of the Youngstown Sheet and Tube Company of Youngstown, Ohio, was in Denver recently on business connected with the company.

John C. Bennett, for 17 years general superintendent of the Prairie Oil and Gas Company of Tulsa, has been made general superintendent of production of the Skelly Oil Company with offices in Tulsa

Jack A. Strand has been put in charge of the gas department of the Ohio Oil Company at Rawlins, Wyoming.

J. J. Moroney, president of the North Baltimore Oil and Gas Company of Okmulgee, Oklahoma, is in Ohio and other Eastern points on a business trip.

J. E. Haskell, a pioneer operator in the Bradford, Pennsylvania, field, died at the home of a daughter, Mrs. Edward O. Bartlett, on March 28 at Pelham, New York.

Max W. Boley of Buenos Aires, representative in Argentina and Uruguay for the Barnsdall Corporation, is in the United States and is on a trip through the oil fields accompanied by James H. Birch of Burlington, New Jersey.

S. E. Savage, secretary-treasurer of International Supply Company, returned to Tulsa this week from a trip through North Texas.

Frank T. Pickrell of El Paso, vice president of the Big Lake Oil Company which is drilling seven tests in Reagan County section of West Texas was a business visitor in Fort Worth early this week.

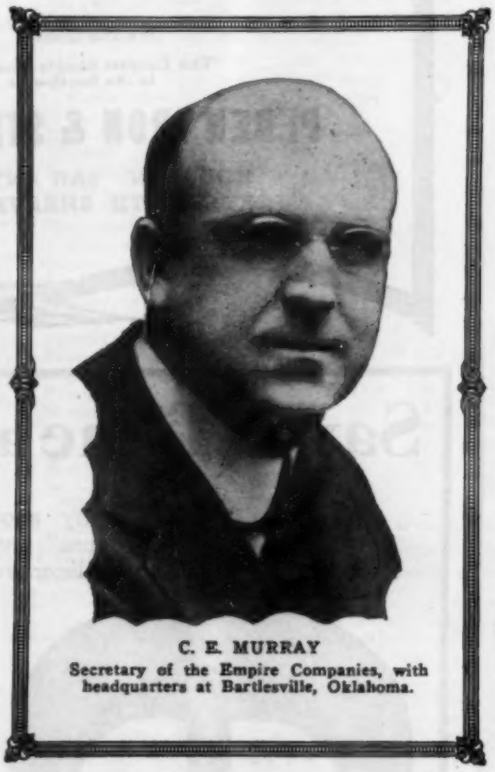
E. L. Kirk of Lima, Ohio, has returned to his home after a business trip to Texas.

J. P. Walker, general manager of the American Tank Company of Oklahoma City was in Tulsa last week in connection with company business.

L. S. Harlowe, of the geological staff of the Louisiana Oil Refining Corporation and associated companies, at Shreveport, has departed for Sullivan, Missouri, where, on Wednesday, April 2, he is to be married to Miss Virginia Williams of that city.

Yonker and Douglas, drilling contractors of Augusta, Kansas, have opened an office at Hutchinson in that state.

J. C. Butcha of the Bartlesville Supply Company of St. Louis is on a tour of the Rocky Mountain territory in the interest of company business.



C. E. MURRAY
Secretary of the Empire Companies, with headquarters at Bartlesville, Oklahoma.

Norman G. Pearsall of New York and C. B. Peters of Tulsa were re-elected as directors of the Middle States Oil Corporation at the annual meeting recently held in New York.

C. J. Wrightsman of Tulsa, president of the Wrightsman Oil Corporation, advises that the corporation is being dissolved and that operations will be carried on in his own name.

Frederic A. Delano, federal receiver for the Red River area between Oklahoma and Texas with headquarters at Washington, D. C., visited the receiver's office in Wichita Falls last week and also made a tour of inspection of the disputed area.

Greene C. Chandler, timekeeper for the Louisiana Oil Refining Corporation, production department, at Shreveport, is convalescing from an attack of pneumonia.

Stephen H. Frazier, well known producer of Moline, Elk County, Kansas, is a candidate for representative from his district to the Kansas state legislature.

R. S. Ellison, vice president of the Midwest Refining Company of Casper, has returned to his office there after a short visit to company headquarters in Denver.

Dr. R. M. Overbeck, a member of the Shell Company's geological department with headquarters at Long Beach, California, was attending the convention of geologists at Houston the past week.

R. E. Cunningham has resigned as treasurer of the Mutual Oil Company of Denver, Colorado.

James F. Garvin, well known oil operator in. Kentucky, died at Burkesville, Kentucky, recently. He was well known in the Mid-Continent field and will be buried at Blackwell, Oklahoma.

S. B. Severson, formerly general superintendent of the Kansas oil division of the Empire Companies of Bartlesville, Oklahoma, has been made general manager of the natural gas division of the Cities Service Company with headquarters at Buffalo, New York.

E. H. Moore of Okmulgee, Oklahoma, president of the Independent Oil and Gas Company, represented the Okmulgee District Oil and Gas Association at the A. O. M. A. convention in Chicago last week. From Chicago he will go to New York.

John A. Udden, consulting geologist of Tulsa, has left for the East and will visit in Washington and other points before returning to the Mid-Continent.

J. L. Weeks, president, and other directors of Pennock Oil Company were re-elected at the annual meeting recently held in New York.

J. J. Durst, district manager of the Oil Well Supply Company in the Rocky Mountain territory, has returned to Casper after a visit in the Mid-Continent field.

E. B. Reeser and other directors of Barnsdall Corporation has been re-elected at the annual meeting recently held in New York.

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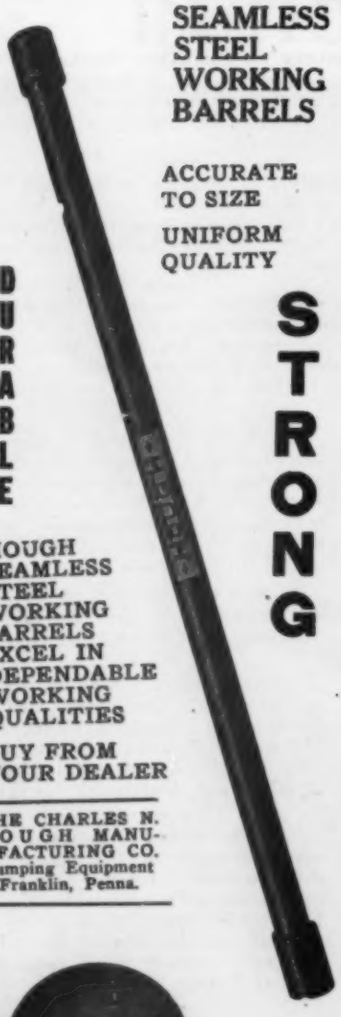

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FIELD NOTES AND PRODUCTION STATISTICS

Southern California Production Shows Gain

Santa Fe Springs well average increases during week—Use bean at bottom of tubing

Los Angeles, Calif., March 29.—The production at five of the fields in Southern California the past week showed an increase of 5500 barrels daily average, largely due to the jump at Torrance and increase at Santa Fe Springs. Since wells are being opened at the older fields every week, it is expected that production for the state the past week will show a net increase instead of a decrease as has been the custom the past few weeks.

In the face of conditions, in addition to the fact that crude storage increased in February and gasoline and kerosene stocks took a jump in the same month, there is little chance for an immediate raise in the price of crude oil in California. A few authorities now expect no increase in the price for another three or four weeks, unless Mid-Continent and Eastern crudes take a healthy jump before that time.

New Place for Bean

The matter of biggest interest the past week was the action of the Santa Fe Springs field where the well average the past week was about 277.4 barrels to the well against 273.6 barrels the previous week. Some of this change is chargeable to the placing of a bean at the bottom of the tubing in three of the Wilshire Oil Company's wells, increasing this company's production about 2000 barrels for the week. One well, No. 3 Baker, had been swabbing for several days from 4600 feet with little result. When a bean was placed at the bottom of the tubing, it came in making 1700 barrels. Two other of the company wells showed an increase from 200 to 250 barrels each when a bean was placed at the bottom of the tubing. This scheme is rather new to the operators. It has been discussed previously and it is reported that it was tried at Huntington Beach without result. The scheme is receiving a lot of attention late this week and it is reported that other companies will make immediate preparations to try it out.

There has been some trouble in pumping the wells at Santa Fe Springs and much experimenting has been done in the past six weeks. Much of the trouble seems to be solved or at least partly solved in the past two weeks and as a result the production curve for the field is flattening out and it is the contention of some now that the decline at this field in the future will be much slower than in the past.

Torrance on a Rampage

During the past week average daily production at Torrance increased to 45,000 barrels from 38,000 barrels the previous week, due to the completion of a number of good wells recently, especially in the southeast part of the field where the wells are not so closely spaced. During the past three weeks 51 new wells have been completed with a total flush of 27,405 barrels. The past week saw 12 wells completed with a total initial production of 6830 barrels, against 14 new wells the previous week with a flush production of 8645 barrels. One hundred seventy wells are now drilling in the field, 120 of which are drilling below 3000 feet. Several of the best wells recently in the south-

(Continued on page 47)

CALIFORNIA FIELD OPERATIONS

The following table from statistics compiled by State Oil and Gas Supervisor R. D. Bush for California for the past several weeks gives a true insight into field activities:

Month of— ..	New wells started	Water shutoff tests	Deepening jobs	No. wells aband.
*June	120	195	59	22
July	94	145	46	23
*August	96	141	41	26
September	122	194	39	36
October	114	131	38	25
November	100	151	48	23
*December	105	181	37	32
Week ending—				
January 5	34	22	18	3
January 12	24	27	6	10
January 19	33	33	10	7
January 26	29	29	14	3
February 2	31	18	12	12
February 9	23	24	9	21
February 16	45	21	15	5
February 23	26	34	13	9
March 1	24	35	13	9
March 8	23	30	18	8
March 15	34	39	13	29
March 22	29	50	15	19

*Denotes months with five weeks.

Imports of Petroleum at Principal United States Ports

The following represents the total imports of crude oil for the month with the current month given by weeks:

	Atlantic Ports						Gulf Coast Ports					Total at
	Baltimore	Boston	New York	Philadelphia	Others	Total	Galveston	N. Orleans Baton Rge.	Port Arthur Sabine Pass	Tampa	Total	All Ports
April	370,000	669,000	1,074,000	625,000	591,000	3,319,000	1,615,000	1,020,000	1,135,000	168,000	4,362,500	7,681,500
May	344,000	515,000	1,026,000	437,000	615,000	2,937,000	1,351,000	910,000	1,184,000	127,000	3,582,000	6,519,000
June	314,000	421,000	1,791,000	755,000	809,000	4,090,000	1,515,000	1,142,000	1,062,000	229,000	3,948,000	8,038,000
July	287,000	465,000	1,806,000	448,000	898,000	3,876,000	1,471,000	1,120,000	833,000	92,000	3,516,000	7,392,000
September	268,000	565,000	1,744,000	660,000	686,000	3,923,000	1,776,000	1,397,000	880,000	224,000	4,277,000	8,202,000
October	365,000	292,000	1,194,000	536,000	816,000	3,203,000	988,000	1,330,000	380,000	50,000	2,248,000	5,951,000
November	223,000	395,000	1,194,000	576,000	757,000	3,145,000	1,478,000	1,000,000	551,000	111,000	3,287,000	5,432,000
December	474,000	574,000	1,243,000	606,000	1,024,000	3,917,000	2,019,000	1,832,000	933,000	259,000	5,043,000	8,960,000
January	398,000	531,000	1,060,000	376,000	949,000	3,314,000	1,295,000	887,000	689,000	15,000	2,936,000	6,250,000
February	520,000	527,000	639,000	458,000	771,000	2,865,000	1,558,000	1,284,000	525,000	195,000	3,562,000	6,427,000
March 1	185,000	236,000	192,000	66,000	606,000	1,285,000	401,000	253,000	236,000	55,000	945,000	2,230,000
March 8	136,000	65,000	128,000	141,000	254,000	824,000	585,000	400,000	206,000	85,000	1,276,000	2,100,000
March 15	200,000	128,000	393,000	188,000	129,000	1,038,000	454,000	36,000	175,000	40,000	705,000	1,743,000
March 22	60,000	255,000	187,000	107,000	366,000	975,000	415,000	390,000	188,000	51,000	1,044,000	2,019,000

NOTE—Figures by American Petroleum Institute.

Receipts of California Oil at Atlantic Coast Ports

The following shows the receipts of California oil at Atlantic Coast ports by months with the current month given by weeks:

	Atlantic Ports						Gulf Coast Ports					Total at
	Baltimore	Boston	New York	Philadelphia	Others	Total	Galveston	N. Orleans Baton Rge.	Port Arthur Sabine Pass	Tampa	Total	all Ports
March	442,000	184,000	1,355,000	496,000	615,000	2,691,000	.....	.....	.....	.....	.....	2,691,000
April	105,000	256,000	2,456,000	502,000	320,000	3,639,000	.....	478,000	.....	.....	478,000	4,117,000
May	444,000	72,000	1,259,000	764,000	964,000	3,553,000	.....	300,000	53,000	.....	353,000	3,906,000
June	821,000	160,000	3,206,000	826,000	808,000	5,821,000	.....	664,000	.....	.....	664,000	6,485,000
July	443,000	75,000	2,068,000	741,000	699,000	4,080,000	.....	559,000	.....	.....	559,000	4,639,000
August	329,000	229,000	2,956,000	836,000	683,000	5,033,000	.....	970,000	70,000	.....	1,040,000	6,073,000
September	1,028,000	237,000	2,581,000	621,000	443,000	4,910,000	.....	703,000	.....	.....	703,000	5,613,000
October	779,000	224,000	2,503,000	779,000	429,000	4,714,000	.....	746,000	.....	.....	746,000	5,460,000
November	591,000	155,000	2,302,000	584,000	271,000	3,903,000	.....	935,000	.....	.....	935,000	4,838,000
December	454,000	215,000	2,901,000	813,000	753,000	5,136,000	.....	729,000	.....	.....	729,000	5,213,000
January	619,000	77,000	3,156,000	659,000	503,000	4,660,000	.....	615,000	.....	.....	615,000	5,275,000
February	326,000	145,000	2,811,000	842,000	75,000	4,199,000	.....	810,000	.....	.....	810,000	5,009,000
March 1	110,000	.....	1,042,000	134,000	70,000	1,356,000	.....	.....	.....	.....	.....	1,356,000
March 8	94,000	77,000	510,000	303,000	143,000	1,127,000	.....	.....	.....	.....	.....	1,127,000
March 15	.....	.....	516,000	245,000	50,000	811,000	.....	.....	.....	.....	.....	811,000
March 22	94,000	.....	667,000	91,000	150,000	1,002,000	.....	.....	.....	.....	.....	1,002,000

Note—Figures by American Petroleum Institute.

(U. S. Completions Begin Page 56)

Average Daily Production for all U. S. Fields

Oklahoma

	Last Week	Prev. Week
Burbank	101,248	96,800
Bristow	49,320	49,430
Tonkawa	36,650	36,450
Osage (outside Burbank)	31,260	30,980
Cushing	24,980	24,960
Hewitt	21,980	22,800
Okmulgee	19,980	19,800
Healdton	15,870	16,000
Duncan and Walters	10,000	9,800
Wewoka	8,460	9,540
Other fields	98,100	88,200
Totals	410,848	404,760

Kansas

	Last Week	Prev. Week
Eldorado	16,750	16,600
Greenwood	16,100	15,900
Fox-Bush	5,945	5,965
Elbing & Peabody	9,740	9,765
Blankenship	3,530	3,545
Augusta & Douglas	3,555	3,570
Florence & Covert	2,845	2,850
Leon & Weaver	1,245	1,240
Other fields	11,470	11,200
Totals	71,180	70,635

Louisiana

	Last Week	Prev. Week
Haynesville	18,865	18,610
Caddo	10,100	10,265
Homer	8,145	8,300
Bellevue	5,365	5,410
Vinton	5.075	5.075
Bull Bayou	5,275	5,300
Elm Grove	1,050	990
Evangeline	510	480
Edgerly	365	365
Anse Le Butte	15	15
Totals	54,765	54,810

Arkansas

Smackover	109,270	103,040
El Dorado	13,280	13,200
Stephens	2,340	2,410
Totals	124,890	118,650

California

Los Angeles, Calif., March 29—The daily average production of the California fields, the past week, compared with the previous week, with number of producing wells in several Southern California fields, was about as follows:

	Last Week	Prod. Wells	Prev. Week
Long Beach	202,000	387	206,000
Santa Fe Springs	86,000	310	84,000
Huntington Beach	55,000	256	56,000
Torrance	45,000	188	38,000
Dominguez (Compton)	5,000	5	3,500
Others	261,000	—	258,000
Totals	654,000		645,500

Magnolia Production Men Hold Annual Get-Together

Dallas, Texas, March 1.—The ninth annual meeting of production and pipe line superintendents, lease and shop men of the Magnolia Petroleum Company was held here last Friday and Saturday, with heads of departments from all the oil fields where the company has production in attendance. These meetings are held in the spring of the year, and primarily for the improvement of business in general, while they serve to further the spirit of loyalty to the company and good fellowship among the men. The business sessions were held in the auditorium on the 26th floor of the Magnolia Petroleum Company's office building. The entertainment program provided by the officers of the company for the visitors included theater parties, a banquet, golf and baseball.

Texas

NORTH CENTRAL

	Last Week	Prev. Week
Corsicana-Powell	128,535	122,500
Mexia	33,000	31,700
Archer County	27,200	28,275
Burkburnett	20,345	21,420
Stephens County	19,075	19,130
Electra	19,285	18,030
Desdemona-Gorman	8,625	8,050
Eastland-Ranger	7,675	7,935
Young County	4,555	4,495
Moran-Shackelford County	3,795	3,795
Currie	3,200	3,400
K-M-A	1,290	1,295
Iowa Park-Shappell	1,265	1,250
Panhandle district	1,340	1,175
Strawn-Palo Pinto County	895	985
Mitchell County	785	825
Brown County	350	350
Petrolia-Clay County	310	315
Reagan County	205	185
Coleman County	140	145
Richland	135	125
Thrall-Williamson County	65	70
Jack County	35	35
Scurry County	30	30
Totals	282,135	275,455

GULF COAST

	Last Week	Prev. Week
Hull	20,900	21,825
Orange	14,595	11,500
West Columbia	13,710	13,650
Goose Creek	13,025	13,450
Humble	5,200	4,700
Sour Lake	4,675	4,650
Dayton	1,620	65
Saratoga	1,540	1,500
Batson	1,245	1,275
Spindle Top	860	862
Damon Mound	645	1,575
Blue Ridge	565	705
Pierce Junction	570	575
Barbers Hill	300	295
Nacogdoches	110	110
Markham	75	75
Stratton Ridge	60	40
Hockley	25	25
High Island	15	20
Big Hill	15	20
Richmond	..	250
Total	79,750	77,167
Total North Texas	282,135	275,455
Luling (Caldwell County)	19,000	16,500
Mirando	4,000	4,250
Somerset	3,000	3,060
Rockdale-Minerva	575	550
Total for Texas	388,460	376,982

Condensed U. S. Production for Twelve Months

(Stated in Barrels)

This table is carried each week by The OIL WEEKLY, and shows daily production average for each state or section. Figures for Oklahoma, Kansas, Texas, Louisiana, Arkansas and Mountain States are compiled by The OIL WEEKLY, while estimates for California and Eastern States are furnished by the American Petroleum Institute.

Daily average for month	*Mid-Continent	North Central Texas	Texas Coastal	†Texas Total	Kansas	Okla.	Louisiana	Eastern States	Wyoming-Montana	Calif.	Ark.	U. S. Total
August	726,981	217,208	105,966	323,148	89,998	419,775	97,936	120,750	83,938	375,000	28,834	1,618,765
September	716,107	207,467	107,790	314,932	89,760	418,880	101,857	114,200	86,490	387,000	33,135	1,540,371
October	714,906	200,465	115,130	316,370	90,404	424,037	97,502	116,375	86,412	423,750	34,127	1,489,005
November	711,521	199,223	114,150	313,376	91,098	421,200	93,410	116,375	106,092	450,000	77,225	1,668,776
December	682,702	170,187	111,819	282,010	87,508	435,007	86,513	114,900	108,679	484,000	107,732	1,732,349
January (1923)	708,372	184,885	115,628	304,790	86,720	436,767	81,205	113,500	123,254	517,500	111,920	1,770,645
February	712,007	180,364	96,984	286,493	85,298	446,345	78,068	112,500	110,328	587,500	101, 346	1,805,496
March	720,287	184,582	89,873	283,355	86,012	449,693	75,352	109,900	116,586	653,000	108,630	1,888,522
April	756,381	192,148	92,320	293,780	86,483	478,100	76,854	106,000	127,860	711,250	102,099	1,983,026
May	793,774	203,776	90,905	304,032	85,500	504,498	75,368	109,125	125,680	700,125	109,033	2,010,840
June	824,297	217,162	92,240	320,250	85,253	521,880	72,745	110,300	129,559	773,000	133,592	2,159,818
July	866,665	274,330	91,795	378,335	84,785	508,405	70,085	113,000	137,300	851,000	132,395	2,275,305
August	826,982	278,574	94,398	393,780	82,741	464,416	68,739	112,625	137,909	866,250	123,000	2,251,956
September	838,517	371,730	93,649	443,461	77,078	421 763	68,935	108,400	157,742	857 700	127,955	2,289,176
October	876,059	408,036	84,320	511,489	71,362	371,657	65,305	107,750	139,912	823,125	125,145	2,340,741
November	935,975	479,383	82,747	580,700	69,337	387,253	64,701	108,125	151,225	768,275	124,188	2,253,806
December	729,591	283,130	78,033	378,478	68,444	378,017	61,138	110,300	146,770	723,845	120,049	1,987,041
January	685,540	243,120	75,085	334,485	67,815	324,605	59,125	108,000	144,735	698,965	114,255	1,900,985
February	729,933	254,180	81,131	362,849	68,183	407,568	59,449	104,500	141,775	675,425	114,726	1,934,476
March 1	754,110	273,345	81,065	382,535	68,915	411,850	58,145	100,000	129,550	646,100	116,285	1,913,380
March 8	774,830	296,030	79,205	397,010	69,335	409,465	55,680	98,000	125,350	654,350	117,000	1,926,190
March 15	769,465	297,405	75,650	396,120	69,255	402,805	55,515	97,000	127,709	654,000	122,520	1,924,915
March 22	750,850	275,455	77,167	376,982	70,635	404,760	54,810	96,000	125,700	645,500	118,650	1,893,037
March 29	764,165	282,135	79,750	388,460	71,180	410,850	54,765	98,000	125,450	654,000	124,890	1,927,595

*Includes North-Central Texas, Kansas, Oklahoma.
†Beginning February, 1923, Somerset, Mirando, Rockdale and Luling production included.
NOTE—Mexia production included in North Central Texas.

Wildcatting Well Under Way in Rockies; Two Pipe Lines Proposed for Colorado

Denver, Colo., April 3.—Recent showings in various sections of the Rocky Mountain area indicate that the wildcatting campaign is well under way there. With the approach of spring and more favorable weather it is not unlikely that even more promising discoveries will be made for geological reports favor much of the country that is being tested.

One of the big factors in stimulating activity in northwestern Colorado has been the completion of the Texas-Transcontinental well on Hamilton Dome near Craig. The wildcat well was completed on January 10, at a total depth of 3820 feet. On March 3, the last date on which a production test was taken, the well was making about 4580 barrels of oil per day.

In La Plata County in the southwestern corner of the state, just north of the New Mexico boundary, J. A. Leidecker recently discovered a big gas flow with considerable oil showing.

The well is located in the southwest quarter of section 25-33-13, on the La Plata river, near the town of Marvel, 25 miles southwest of Durango, and six miles north of the boundary line. It was spudded in December and has been drilling since that time. A gas sand that yielded approximately 1,000,000 cubic feet of gas was reported from about 770 feet. After casing off this flow of gas, drilling was resumed until another big flow, estimated at 2,000,000 cubic feet was encountered at 1190 feet. This sand was also cased off and at 1464 feet the oil sand was topped.

Estimated thickness of the sand is 66 feet and the flow of oil is approximated at 200 barrels. It is dark green, of paraffin base and tests 58 gravity. The sand from which production is coming is believed to correlate with the Hygiene in Northern Colorado and the old Boulder field, although this is not definitely known.

The biggest well in the history of New Mexico was reported recently when the Mid-West Refining Company brought in its No. 7, located on the northeast quarter of section 19-29-16, Hogback Dome, Navajo Indian reservation. The sand was topped at 647 feet and flush production was estimated to be 1200 barrels. The drill barely touched the Dakota sand and oil came to the top of the casing and began to flow within 45 minutes. So far the well has not been finished, but from present indications it will be a good one. In this well the sand was reached nearly 100 feet shallower than in the other wells on the Hogback Dome. The well proves no additional structure but is important from the standpoint of the quantity of production as well as the high gravity of the oil, which is 60.5.

The Union Oil Company has made application for a permit to lay a pipe line from the Wellington Dome in Northern Colorado to Denver, and it is thought that work will start in the near future. Approximately $5,000,000 will be spent on the line. An application made by the Colorado Oil and Gas Pipe Line Company some time ago for a line to traverse about the same territory as the Union lines, is now pending.

Southern California
Production Shows Gain
(Continued from page 45)

east part of the field have taken in more sand than usual in the field and they are holding up well.

Shut in wells in Midway-Sunset area are fast being opened and it is understood that every shut in well in the district will be opened inside of two weeks. About 7500 barrels of production is still shut in at Coalinga but plans under way now call for opening of all the wells by April 15. At that time it is doubted if there will be any real shut in production in the state.

Drilling Deeper

At Rosecrans field, the Union Oil Company's No. 1 Rosecrans was wet when the cement was drilled out, for the fourth time. The hole is now being drilled deeper and the next cementing job will be a little deeper in an effort to get a better seat for the casing.

There were no completions in the Dominguez (Compton) field the past week, although five wells are about ready to be drilled in. Dominguez now has five producers and the field, a new one, has a daily production of 5000 barrels.

Official Statement Shows Mexican Production Loss

Tampico, Tamps., April 3.—Production of crude petroleum in Mexico in the year 1923, amounted to 149,529,088 barrels, compared with a production of 182,278,457 barrels in 1922, according to a report recently issued by the Mexican Department of Petroleum.

Heavy oil production amounted to 88,529,448 barrels, and light oil production to 60,999,940 barrels. Up to recent years heavy oil had been surpassed by the light oil production. The increase in production of heavy crude is due principally to development work along the banks of the Panuco River, particularly in the Hacienda of Cacalilao, northeast of the village of Panuco.

It is also pointed out by the Mexican Petroleum Department that some of the oldest and longest exploited fields, such as those along the Tuxpam River from Tepetate to Alamo, continue to produce abundantly, new and important wells having been brought in recently, and some of these wells in so-called salt water areas.

Production in 1923 was less than in any of the three previous years, but this is not taken as an indication by the Petroleum Department that the Mexican petroleum industry is declining in importance. The decline in production evident in recent years stopped about the middle of 1922, since which time a monthly average of between twelve and fourteen million barrels has been almost regularly maintained.

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Weather Conditions Retard Kansas Wells; Operators Impatient for Opening of Spring

Wichita, Kans., April 2. — Kansas seems to be getting more than its share of the bad weather and operations have been virtually at a standstill on account of it. For the past three weeks, the roads to the various fields have been impassible, especially to the new wildcat producers scattered throughout the state.

There are so many things depending upon the weather conditions that operators are getting impatient for the opening of spring weather. During the winter the state has had more wildcat completions than ever before but the snow and cold has retarded the progress so much that most of the new pools are of the one-well type.

A new pool for Elk county has just been opened up by Pennock, Griffith and Frazier in their No. 1 Collier in the northeast corner of the southwest of section 30-30-11, which will probably pump from 50 to 75 barrels per day flush. The oil of 29 gravity was found at 1122 feet. This well is located about two miles from the nearest production.

The Lewis Oil Company's new wildcat for Cowley county has been completed and is now making about 25,000,000 cubic feet of gas and 50 barrels of oil. Elliott No. 1 of Lewis is located in the southeast corner of the southwest of the southeast of section 31-30-6 and the sand was found at 2835 feet.

Shawyer and Sutter's No. 1, in the northwest corner of the northwest of the southwest of section 8-31-6 will probably extend the Eastman field a quarter of a mile south of present production. The well is making a million feet of gas from a sand at 2738. This same company recently found a dry hole in their Sams No. 1 in the southeast corner of the northeast of the northwest of section 5-31-6.

Five new wells have been completed in Greenwood county which have added almost 500 barrels to the daily output of the field. The Theta Oil Company owns two of these new completions, one in section 34-22-13 which is good for six barrels from a depth of 1830 feet and the other in section 10-23-13, a twenty barreler at 1797 feet. The largest well for this county was the Shaffer Oil Company No. 9 Shindler in the southwest corner of the southwest of section 15-23-13 which made 250 barrels initial production from 1584 feet.

With the bailer still in the hole the Hitchcock well of the Champlin Refining Company near Peck, filled the hole with oil and made several small flows while it was shut down on account of the bad weather. Operations on this well will be temporarily held up until the Champlin's Heskett test, which is drilling below 2300 feet, is drilled deeper.

There are, at the present time, a total of 10 locations near the Russell county well of the Valerius Oil and Gas Company, which will install rigs just as soon as the weather permits.

Few Days of Fair Weather Bring Drilling Impetus in Eastern States

Pittsburgh, Pa., April 3.—A few days of sunshine throughout eastern states during the week speeded up drilling considerably. Reports indicate completions nearly doubling the number reported last week, but with a decreased initial production. Completions for the week totaled 159 wells. Of this number 38 were dry holes, 51 were gas wells, and 70 were good for production. This is a gain over the previous week of 75 completions, 20 dry holes, and 27 gas wells.

The only well above the average to be reported was found in Jay county, Indiana, by Masters & Colt, in No. 17 on the Ritenour lease, with 200 barrels a day.

In the New York area in the Boliver field four unusually good shallow sand pumpers were reported, two of them at 7 barrels each, one at 10 barrels and another at 17 barrels. This indicates that the territory is showing better producers than has been the case for a number of years, and a big drilling campaign is expected in the near future, or as soon as the cold weather lets up. West Virginia had a number of fair gas wells, but as far as oil is concerned, made a very poor showing, the production from the week's wells only amounting to 20 barrels. Pennsylvania reported two gas wells.

Kentucky had a busy week with 43 completions scattered over 17 fields of the state. Many wildcat ventures proved failures, although Elliott county is credited with three 10 barrel producers and one gas well. This means the opening of a new field of promise. In Warren county a shallow sand well good for 100 barrels was found by Wiles and others on the Smith lease, out of Bowling Green. All sections of Kentucky are showing a vast improvement in new work.

Southeast of Columbus in Hocking county, Ohio, the Preston Oil Company, a subsidiary of the Logan Gas Company, uncovered a 60 barrel Clinton sand well on the Stone lease in the Central Ohio district, while Southeastern Ohio had a goodly number of new wells on the light order. Northwestern Ohio also had a good week, the sensational development of the area being a big extension to the old field, brought about by the bringing in of three producing wells near the town of Payne, in Paulding county. Two of these wells came in at 25 barrels each, and the third at 50 barrels, all getting their oil in the Trenton lime at around 1440 feet. The finding of these wells indicates that much new work will be done in that county as well as counties between it and the old field proper. A several mile extension has also been made to the south of the field according to reports not yet confirmed, while the Paulding county extension is far to the north of the field proper.

Cromwell Looms as Factor in Oklahoma

Pipe line companies rushing work on lines to handle 8000 barrels being produced daily

Tulsa, Okla., April 2.—A proven example that the bringing in of a wildcat well means more than the opening of one more field for a certain district is evident in two places in Oklahoma today. Wewoka, the mother pool of the Seminole-Hughes County area is more or less responsible for the Cromwell pool of today; the Stroud pool of Lincoln County might be the big factor in opening up another big field for the county for the Wilcox Oil and Gas Company well in section 2-13-6 is making 150 barrels per day.

Improving

The T. B. Hoffer et al well, the largest for the state this year, seems to be improving in production. The sixth well for the Cromwell pool made 197 barrels per hour after the tools were pulled out and the well drilled five feet deeper. The well is now at a total depth of 3507 feet. This well brings the total production of the Cromwell pool to the 8000 barrel mark, which is just a little less than the daily production of the Wewoka pool with 46 wells producing. It is obvious that the Cromwell pool will be a big factor in the Oklahoma crude situation from the way the major pipe line companies are rushing their extension lines to completion in order to take care of the oil. It is reported that the Gilliland Oil Company has purchased a one-half interest in 80 acres, comprising the west one-half of the northeast quarter of section 16-10-8 in this field, from the Livingston Oil Corporation for a consideration of $100,000 cash and Gilliland will drill two wells for the Livingston Corporation.

The Shaffer Oil and Refining Company extension well for the Cromwell pool has been drilled deeper and the present gas flow is given as 60,000,000 cubic feet. Two other wells in the field proper have been drilled deeper with good results. The Tidal-Osage No. 1, in section 21-10-8 was drilled four feet deeper and is now making 900 barrels per day; the McMan No. 1 in section 22-10-8 drilled eight feet deeper and the total daily production is now 1310 barrels.

The importance of geology is possibly one of the biggest factors in the opening up of the new pool in Lincoln County by the Wilcox Oil and Gas Company. This company admits that this is the first time they have followed the advice of geology but that they are now satisfied that the information outlined for them has been of material help. The Wilcox Smulian No. 1 in the northwest of the southeast of the northwest of section 2-13-6, about six miles from the Stroud pool will be a hundred and fifty barrel producer of 43 gravity oil from sand thought to be the Wilcox, at 4225 feet. It is not an unusual thing for Homer Wilcox to find oil wells in a sand that bears his name and which he first brought into prominence when the Beggs district was opened up.

Lincoln County now has three producing areas, the Stroud pool, the Chandler pool and the area between Stroud and Prague in which the Wilcox well is located. It will also be remembered that almost every wildcat well drilled in this county has made some kind of a showing of oil or gas. With the successful completion of this new well, the county will be booming with "oil play." The daily production of the Stroud pool is now 4112 barrels from four wells.

The shallow well of T. A. Johnson et al near Coweta made 38 barrels per hour by actual gauge. This well, which is located in section 11-17-16 in Wagoner County came in last week from the shallow depth of 745 feet.

The Clark and Cowden wildcat well in Jefferson County which was thought to be a real commercial producer, has failed to come up to expectations. After setting a liner in the well, which more than likely slipped over a part of the pay sand, the well made only 35 barrels of oil per day by actual gauge. This wildcat which opened up a new producing area for the state is located in section 25-6-6, and the initial production was given a week ago as 75 barrels per day.

Bristow District

A large well for the Bristow district has just been completed by the Cortez Oil Company in their Abraham No. 4, in the northwest of section 22-16-8. The well started off with an initial flow of 200 barrels per hour from the Dutcher sand at 3142 feet but it is reported that this flow has been increased somewhat. If the present production of 8000 barrels per day holds up, this will be the largest well for the state this year and will help the falling production of the Bristow district.

On the Creek County poor farm, Wilcox Oil and Gas Company completed their third successful Oklahoma well for the week, by bringing in a thousand barrel well. The well is located in the southeast corner of the east 80 acres of section 35-16-8 and was drilled to the Dutcher sand. In section 5-16-8, the Olean Petroleum Company ran into a 26,000,000 foot gas sand when they were drilling an old gas well from the Tucker to the Wilcox sand. The gas will be mudded off and drilled to the Wilcox.

The Mutual Oil Company has deepened its No. 2 well in the Wild Horse district of Osage County and the well is now making 2245 barrels per day. The well is located in the southeast of section 2-22-10 and is 2150 feet deep. The Tidal-Osage Company has an 883 barrel well in the Burgess sand at 1954 feet. Their No. 18 is located in the northeast of section 34-22-10.

Pontotoc County

The Howarth Oil and Gas Company (H. F. Wilcox Oil and Gas Company) have a wildcat well in Pontotoc County which is making about 5,000,000 cubic feet of gas from a sand at 1550 feet. The well is located in the southeast corner of the southwest of the northeast of section 19-5-7, near Francis. A hole full of water was cleaned out by the gas flow.

As a result of the successful completion of an extension well of the Humble Oil and Refining Company in the southeast of the southwest of section 20-1s-3w, leasing has been stimulated somewhat and all major companies are active in securing new holdings. The Humble well, a one and one-half mile extension to the Sholom Alechem field, swabbed 185 barrels during its first 15 hours from a sand topped at 2873 feet.

In the Graham field of Carter County, the Cotton Petroleum Company has a 35,000,000 cubic foot gasser coming from what is apparently a series of sands ranging from 1819 feet to 2100 feet. With a total thickness of nearly 200 feet the sand should prove one of the most prolific yet found in the gas producing area of the Graham field. The well is situated in the northeast of the southwest of section 30-2s-2w and is known as the Sparks No. 6.

With the report that the Marland Company is bringing in another well in the Hominy district of Osage County, comes the news that the Red Bank Oil Company, successful purchasers of the southwest quarter of section 20-23-8 at the recent Osage sale, will start three wells on their newly acquired acreage. These wells will be spudded along the east line of the 160 acre tract. The Marland completion will be their No. 3 in the southwest corner of the southeast of section 20-23-8.

A three hundred barrel well has just been completed by the Independent Oil and Gas Company and C. L. McMahon in northwestern Okmulgee County. The well, which is located south of Mounds, topped a sand at 2537 feet.

The Gladys Belle Oil Company and Independent Oil and Gas Company topped a sand at 2514 feet in their No. 3 Enoch Mitchell in the northwest corner of the southwest of section 6-12-12 in the Tiger Flats district and the well is good for about 300 barrels per day. The oil of 38 gravity is flowing with the tools still in the hole.

Production of the Papoose pool of Hughes County is given as 1604 barrels from six wells while the Cromwell pool production is 4457 barrels from the first 10 wells completed. This does not include the Hoffer et al well.

Colorado Section Gets Name of Moffat Pool

Denver, Colo., March 28.—In order to avoid possible confusion with the Hamiltom Dome area in Wyoming, the Texas Production Company has officially named the territory adjacent to their wildcat well in Moffat county, Colorado, the Moffat pool.

Archer County Overplus Will Be Relieved By Lines Now Being Rushed to Completion

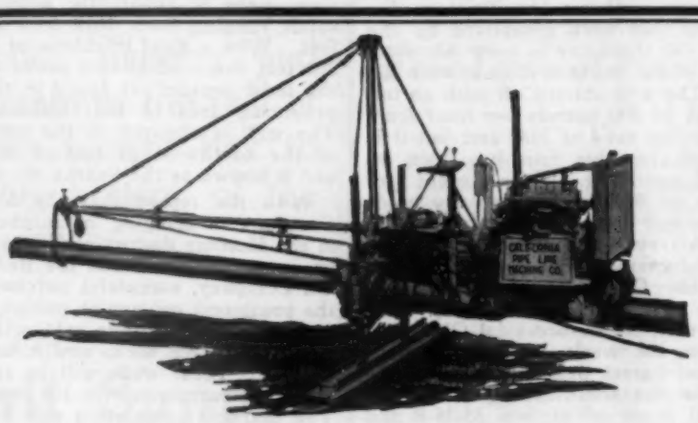
Wichita Falls, Texas, April 1.—Flush production from recent completions in the Wilmot-Wilson field in Archer County continues to overtax the carrying capacity of present pipe line facilities, and a number of operators have been forced to partially shut in their wells until the two new lines now building to the field can be placed in operation. The Gulf Pipe Line Company has started work on an extension from its pump station in the lower part of the Ferguson pool to the Wilmot-Wilson field, and will probably be running oil within two weeks. This extension line will be about 10 miles in length, and four-inch pipe is to be used. A pump station is to be erected on Empire's Wilson "B" lease on the north end of the Wilmot-Wilson field. Good progress is being made on stringing the six inch line to the Wilmot-Wilson field from Wichita Falls by the Wichita Pipe Line Company, which is owned and operated by independent refiners, and upon the completion of both of these new lines the combined carrying facilities of the lines operated by The Texas Pipe Line Company, Texhoma Oil and Refining Company, Sunshine State Oil and Refining Company and the Griswold Oil Corporation will be more than ample to take care of Archer County's entire production.

Some of the largest producing leases in the Wilmot-Wilson field have been effected by the temporary over production, and a large number of gas tight tanks have been erected on the leases to avoid a complete shut down of operations on days that production runs particularly high. Among those forced to curtail production lately are: Mutual Oil Company, P. F. Gwynn et al, Kentucky Oil Corporation et al, and Empire Gas and Fuel Company. The Texas Company has voluntarily shut down some of its wells on the Parrish lease on days that the field's production runs are high, although The Texas Pipe Line Company has the largest carrying facilities in the field and is running a large percentage of the oil produced by independent operators. The Mutual Oil Company has erected and filled about 12,000 barrels of small storage tanks on its 40 acre Wilson lease, which was purchased about three weeks ago for $600,000, and is erecting more tankage until relief can be obtained. Mutual has not been able to get a full gauge on the production of this lease since it was purchased. The Kentucky interests have erected and filled about 8000 barrels of storage on the lease, and have not been able to produce their wells to capacity in more than 10 days, while in the meantime negotiations are being made for the sale of this property to a Dallas concern.

The Jetter section of the Wilmot-Wilson field registered another extension to the east last week when Grisham & Parks' L. F. Wilson 1, located in the southwest corner of the north half of lot 9, section 31, swabbed 100 barrels of oil in 12 hours from regular sand at 1575-78 feet. Near the north line of Archer County and northeast of the Ferguson pool, Maer & Standiforth's Kemp & Kempner, section 63, swabbed 325 barrels of oil early this week at 1484-89 feet, and indicates that a prolific area exists although dry holes were drilled years ago in all directions from this new well and the other well that opened up the area several weeks ago on an offset location.

Two wildcat tests in the southwest part of Archer County and about 10 miles northeast of the Swastika pool, encountered oil sand pay near the 1400 foot level last week and give promise of a new field for the county. The Comac Oil Company's L. H. Farmer 1, located near the east line of the W. C. Winters survey A-663, is reported with 450 feet of oil in the hole from sand pay at 1412 to 1420 feet, although several feet of the pay was accidentally cased off and is standardizing to complete. Several miles to the east of this test, W. J. Green and J. G. Flowers' Abercrombie-Taylor wildcat test in section 45, is showing oil and gas from sand pay at 1389-91 feet.

The wildcat test of Brit Cranfill et al on the W. B. Mills land, located in section 1281 in the southeast corner of Baylor County, is reported to have picked up a favorable oil sand at 1415 feet, and is underreaming casing to make a test.



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Receivers Suspend New Work on Teapot Lease

Casper, Wyoming, April 3. — Since arriving in Casper last week, Admiral Joseph Strauss, representing the U. S. Navy, and Al E. Watts, representing the Sinclair interests, have been familiarizing themselves with the conditions of the Mammoth Oil Company's operations on the Teapot Dome. The heavy snow has handicapped their investigations to some extent.

The receivership affects only one lease, that of the property on the Teapot Dome. Other holdings of the Mammoth in the immediate vicinity will not be bothered.

Both receivers stated that development work will be suspended but that wells will probably be operated with the present force of employes for the time being, at least.

Stephens County Adds Only One Well for Week

Fort Worth, Texas, April 1.—Critten & Lacey's S. C. Cobb 2 furnishes the only new production of any importance for Stephens County during the past week with an initial flow of 285 barrels of oil and 4,000,000 cubic feet of gas from lime pay at 3245 to 3305 feet. This well is located in the southwest corner of the northeast quarter of section 16, and about four miles north of Caddo. In the same territory, Mid-Kansas Oil & Gas Company's D. Lowe 2 made 110 barrels initial flow after shot in the same producing horizon.

The semi-wildcat test being drilled in the southwest part of Stephens County between Aeolin and Harpersville by Brown & Company on the L. McClenney land, section 2261, is reported showing considerable oil after encountering lime pay at 3335 feet and drilling in about 10 feet.

Mirando District Now Has 45 Rigs Running

Mirando City, Texas, April 1.—Forty-five rigs are running this week in the Mirando district in Webb and Zapata counties. There are six wells drilling in; twelve standing cemented ready to drill in soon and ten derricks waiting for rigs. The remainder of the rigs are on well in process of drilling and there are several on wildcat tests outside proven area. This is the biggest drilling campaign ever known here and indicates the extent of development. The length of this district is approximately 30 miles.

The district is being explored with the drill for more than fifty miles however, from the Rio Grande on the south to the McMullen county line on the north with several rigs in Duval and Jim Hogg counties and scattered wildcatting in McMullen and Live Oak counties up to the new Callihan field.

There are approximately 260 producing oil wells and 35 gas wells along this escarpment.

Magnolia Petroleum Company added a new well this week in No. 19 in the Schott pool for 50 barrels. Alworth Brothers set casing in No. 3 and Carnahan Producing and Refining Company are drilling in on 58. McCree Petroleum Company are pulling the liner in their 8 and will go deeper. Shaw et al are down 2800 feet in their deep test. It is reported some gas and water was found at 1920 feet, a little below the producing level of the shallow sands.

In the Wolcott pool, Elm Oil & Gas abandoned their test and have made a new location. Casing will be salvaged.

Mid Ojuelos pool: Cintex set casing is drilling in after setting casing at usual depth. Quigg-Olsen are setting casing at 1701 feet on cap rock.

Aviators or Edgington pool: Andrews Petroleum Corporation standing in their No. 3 at 2120. Black Panther Petroleum Company drilling below 1200 feet. Cornhuskers drilling at 1600 feet in No. 1; set and cemented at 1650 in No. 2 and have derrick up for No. 3.

Guiberson Corporation Acquires Crowell Packer

Tulsa, Okla., April 1.—The Guiberson Corporation of Dallas, Texas, has absorbed the interests of the Crowell Packer Company of this city and will continue hereafter under the ownership of the Guiberson interests.

A. B. Crowell will be in charge of the packer division of the Guiberson Corporation and Jimmie Duff, local representative of the Crowell Company will also remain in the services of the present owners. Frank Crowell and William Lynch, formerly field men of the Crowell organization will remain in charge of the field work.

The chief products of the Crowell Packer Company which will hereafter be put out under the Guiberson name was the Crowell Control Head Packer. This is the packer that can be set in the well while the oil is flowing, allowing the flow to come between the tubing and the packer until set. Another product is the Crowell Oil Saver.

E. E. Crowell, inventor of the spiral plug as well as the other products mentioned, will become a member of the Guiberson organization.

Powell Makes 125,750 Barrels on April 1; All Oil Being Taken and Premiums Offered

Corsicana, Texas, April 1.—Another big producer was added to the Hill tank farm section of the Corsicana-Powell field early this week when Mills Bennett's K. Wollens 3 started flowing at rate of 300 barrels of pipe line oil per hour from the Woodbine sand pay at 2981 feet. This well is located in the southeast corner of a small lease, and offsets the first big well completed by Bennett about a month ago. The Texas Pipe Line Company has connected to the new well and is running all the oil. This lease is located on the west edge of the big flush production area, which centers on the Hill tank farm, and has a 3126 foot dry hole drilled several months ago.

The heavy flow maintained by some of the wells completed recently in the Hill tank farm section is making it possible for the Corsicana-Powell field to retain its rank as the second largest oil producing field in the country with a comfortable lead, being exceeded only by the Long Beach field in California. The production of the Corsicana-Powell field for the 24 hour period ending 7 a. m. April 1 amounted to 125,750 barrels, as compared with 121,925 barrels for the day previous. Pipe line companies are actively soliciting crude, and premiums are available on deliveries to independent buyers.

The Hill tank farm section is proving to be the most prolific part of the field, and it is yet to be defined on the north, northeast and northwest edges. A new record for the field on big production per well has been established by John W. Hooser and associates' Hill 1-A, which came in March 2 flowing better than 25,000 barrels initial production, and delivered to the Texas and Humble Pipe Line Companies 306,309 barrels of pipe line oil the first 22 days, or an average of 13,923 barrels per day, according to the owners. On an adjoining 15-acre tract, Hooser et al's Hill 1-B is setting casing to drill in; Hill B-2 is drilling below 1000 feet; Hill 3-B has been spudded and a location is staked for Hill 4-B, while on the K. Wollen 20-acre lease two other tests have been started. Another big well production is Stroube & Stroube's Elliott 2, which has produced slightly more than 300,000 barrels of pipe line oil during the first 34 days after being completed from the lower sand pay, and is still flowing by heads.

Owners of completed wells on the fault side of the field are meeting with favorable success in drilling deeper into the sand and through shale break to increased production, while more than 50 tests are now drilling throughout the field, with about 30 of these going down on the west side of the structure and between the T. & B. V. railroad and Chambers Creek.

Three Guadalupe County Wells Make 8000 Barrels

Luling, Texas, April 1.—Three completions last week in Guadalupe county with a combined flush production of 11,600 barrels of pipe line oil was the feature event in this district. Another unusual feature however, was a tremendous gas blowout in the C. C. Cannon well in the Luling pool which blew the drill stem out of the hole and wrecked the derrick. This is the first time a drill stem has been blown out since the pool was discovered. A towerman had a close call, escaping only by jumping to a guy wire down which he slid to safety as the derrick collapsed. Nobody was hurt. The derrick will be rebuilt by the drill stem is a loss.

The three Guadalupe county wells were all on the Allen tract near Gander Slough. They are the United North & South Oil Company's 8, 7 and 3. The No. 8 is the biggest well in this pool. It blew itself in for about 8,000 barrels flush production which will probably settle to around 5000 barrels. It is a fine well and is flowing into a field line with clean oil. The flush is not yet off. The bringing in of these three wells is taxing field line capacity and the Atlantic is preparing to build additional lines into the pool from the railroad loading racks. The No. 7 Allen is good for around 2000 barrels flush and the No. 3 around 1000 barrels which may be increased.

An important completion of the week was the United's No. 3 Gideon which is making about 1000 barrels and proves up an edge of Caldwell county not heretofore known to be productive. It indicates production on a part of the original Luling pool to the east of the proven district.

United's No. 2 Allen well which ran wild when it came in, is being cased and may make anywhere from 4000 barrels upwards. No. 1 Allen is said to have increased its production after producing a few weeks.

Magnolia Petroleum Company is preparing to drill in No. 1 Schubert.

New Stunt Increases Output of These Wells

Los Angeles, Calif., March 28.—Officials of the Wilshire Oil Company this week pulled a new stunt at Santa Fe Springs by placing a bean at the bottom of the tubing string in flowing wells and greatly increased production. One Wilshire well increased from 350 barrels to 1100 barrels when so treated.

Santa Fe Springs production increased about 2000 barrels a day during the past week largely brought about by the increase at the Wilshire wells. A. T. Schwennesen of the geological department of the Shell Company, who has had headquarters at Los Angeles for some time, is being transferred to Denver by his company, where he will open an office early in April. John G. Burtt is being transferred from the San Francisco offices of the Shell Company to Los Angeles to succeed Mr. Schwennesen. This probably means that Shell Company will get into the game in the Mountain states. Union's No. 1 Rosecrans was wet when cement was drilled out and is now drilling deeper for a new seat.

Sun Company Completes Large Well From Orange Deep Sand; Gulf Coast Price Up

Houston, Texas, April 3. — An advance of 20 cents in the price of crude with a simultaneous increase in production are the chief events in the Gulf Coast area this week. Production of all fields reached the total of 79,750 barrels as compared with 77,167 barrels during the preceding eight days. On April 3, 1923, the total amount of crude reported from coastal fields was 93,300 barrels, and on the same date in 1922, the total amount averaged 101,185 barrels. From these figures it is evident that higher prices will have to continue to stimulate drilling to the point where production can be restored to its former level.

The two fields that attracted attention last week, Barbers Hill and Stratton Ridge, reported nothing of importance during the week just closed. Mills Bennett's No. 1 Texas Fee which came in at Barbers Hill last week for more than 800 barrels, has sanded up and attempts are being made to clean the hole. This well topped the sand at 3480 feet and gave promise of being an excellent producer. It flowed at the rate of about 800 barrels for a short time and then dropped to less than 100 barrels and kept decreasing until production stopped entirely.

At Stratton Ridge, C. C. Cannan's No. 1 Boggs is being put on the beam. This well came in about two weeks ago and made better than 2000 barrels and then sanded. The screen has been cleaned and attempts will be made to make the well flow by pumping it.

Both the Rio Bravo and Associated Oil Company have spudded tests at Stratton Ridge during the past week. The Rio Bravo well is drilling below 700 feet and the Associated test is below 500 feet.

At Batson, Sour Lake and Saratoga activity shows an increase with several independent operators undertaking development of their holdings.

Hull leads all coastal districts in the amount of work going on with 34 outfits in operation. Orange follows with 27, and Goose Creek holds third place with 15. There are at the present time approximately 105 outfits in operation in the Gulf Coast. This number is increasing each week and a few more weeks of fair weather should bring a considerable addition to the present number.

The biggest well for the week was reported from Orange where the Sun Company completed its No. 3 Brown. The well made more than 2000 barrels last week from a depth of 4600 feet, and when deepened to 4620, production was increased to 5300 barrels of which 20 per cent is basic sediment and water. This is one of the biggest wells that has been brought in from what is generally known as the "deeper" sands in the Orange field. No. 3 is in the same section of the field as No. 2 Brown which came in as a good well last fall. No. 1 Kato, of the Sun Company is being tested this week. This well is considerably northeast of production.

At Hull, the Gulf Company got a 500 barrel well in its Phoenix Development Company No. 35, at 3125 feet. The Republic Production Company abandoned its Dolbear 78 as a dry hole at 3680 feet.

The total number of completions reported for the week was 12. These were distributed as follows: Goose Creek, 3; Spindle Top, 1; Hull, 4; and Orange, 4. Of this number, 10 were producers, and two were abandoned as dry holes. The abandoned wells were the Humble Oil & Refining Company's No. 54 Simm Smith at Goose Creek, abandoned at 2530 feet, and the Republic Production Company's No. 78 Dolbear at Hull, abandoned at 3680 feet.

Halliburton Wins Cement Patent Suit

Duncan, Okla., March 29.—Establishing what may be a precedent in the matter of court action in oil well cementing cases, a decision has just recently been handed down in Federal court in California upholding the patent rights of Erle P. Halliburton of Duncan, a recognized authority on oil well cementing and holder of several patents of this nature. Mr. Halliburton recently returned to Duncan from the West Coast where the case was heard.

The Halliburton Oil Well Cementing Company with general offices here and representatives in the various fields is making plans to enlarge their plant located in Duncan and will engage in the business on a much larger scale than heretofore.

Stop Losses from "Blow Outs"

The Hosmer Blow Out Preventer is being sold extensively on its merits as the most efficient tool yet produced for controlling excess gas pressure encountered in drilling.

The Hosmer provides a means of closing the opening between the outer casing and the drill pipe. Gas collecting in this space can then be discharged through proper openings provided.

Screws to top of outer casing. Assembly inserts around drill pipe below coupling or tool joint and is dropped into body of preventer. Weight of drill pipe rests on assembly, expanding ring rubber and shutting off pressure.

The Hosmer is heavily constructed to withstand high pressures. No prospect work should be attempted without it. It has saved many wells which otherwise would have been lost.

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Los Angeles Harbor Crude Movement Gains for Week

Los Angeles, Calif., March 29.—For the week ending March 28, twenty-six tankers left Los Angeles Harbor carrying 1,282,651 barrels of crude oil, 294,116 barrels of fuel oil, 261,891 barrels of gasoline and 60,765 barrels of kerosene to various ports of the world, according to figures compiled by the Marine Department of the Los Angeles Chamber of Commerce.

Of the total crude, 227,635 barrels went to ports on Pacific Coast, 80,000 barrels to foreign ports and 975,016 barrels to domestic Atlantic points.

The records for the past two weeks follows:

	Last Week	Previous Week
Tankers departed	26	29
Total crude moved	1,282,651	1,242,739
Total fuel oil	294,116	638,972
Total gasoline	261,891	114,857
Crude to Pacific	227,635	351,453
Fuel to Pacific	75,572	38,003
Gasoline to Pacific	53,916	36,000
Crude to Atlantic	975,016	762,286
Fuel to Atlantic	15,556	.....
Gas to Atlantic	71,070	.....
Fuel to foreign	202,988	600,969
Crude to foreign	80,000	129,000
Kerosene to foreign	60,000	.....
Gasoline to foreign	136,900	78,857

Simms Statement Shows Gain Over Former Years

New York, N. Y., April 3.—In the annual report of the Simms Petroleum Company and subsidiaries for the year 1923, the company's operations are summarized as follows:

Gross revenues were $4,326,398.99. After charges to operating expense of $690,336.38 for productive drilling and after marking down the oil inventory to the December 31 market, earnings before depreciation, depletion, and sundry adjustments were, $1,712,974.61. Charges for depreciation, depletion and sundry adjustments were $1,371,566.39 leaving a balance of $341,408.22 to be added to profit and loss surplus.

Net production for the year, after royalties, averaged 10,847 barrels daily, compared with 7337 barrels in 1922 and 3198 barrels in 1921.

Steel storage capacity was increased 45 per cent and 1,046,142 barrels added to the oil inventory. Payments for leases amounted to $461,361.71 and net additions costing $517,448.20 were made to well equipment, steel storage and other physical equipment.

Oklahoma Storm Exacts Heavy Oil Field Toll

Tulsa, Okla., March 30.—More than half a million dollars damage was done to derricks and other oil field equipment by a severe windstorm and rain which visited the central and northern portions of the state of Oklahoma Friday.

This loss seems to be about equally divided among the fields of Tulsa, Creek, Pawnee, Payne, Lincoln, Okmulgee and Okfuskee counties, and a part of the Tonkawa field.

More than four hundred rigs were blown down in the Tulsa area alone while the Tonkawa district reports three hundred down. At Drumwright in Creek county, one hundred and seventy rigs were damaged to the extent of $70,000. Eighteen rigs are down in the Burbank field of Osage county.

At Shawnee, the county seat of Pottawotamie county, the storm literally gutted the city and surrounding country. Thousands of dollars and several lives were lost as a result of the severe wind.

In the Tonkawa district, the Comar Oil Company, controlled by the Roxana Petroleum Company and Marland, suffered the greatest loss, a total of 140 rigs demolished.

Stocks of Crude Petroleum

Stocks of crude petroleum for statistical purposes are classified as follows:

1. **Producers' Stocks:** Petroleum held on the producing properties (lease or "field" storage). Producers' stocks are reported to the Geological Survey annually and are included in the Survey's final statistics.

2. **Pipe Line and Tank Farm Stocks:** Petroleum that has been transported from the producing properties but not delivered at refineries or at other points of consumption and is held on tank farms, in tanks along pipe lines, and in the lines. Pipe-line and tank-farm stocks constitute approximately 90 per cent of the crude petroleum held in storage in the United States. For the states east of California such stocks are reported monthly to the Geological Survey as gross stocks, including the total contents of tanks and pipe lines, and as net stocks, which are gross stocks minus sediment and water. The stocks reported for California are compiled by the Pacific Coast office of the American Petroleum Institute and include producers', pipe-line, and tank-farm stocks (but not refinery stocks) of crude oil, residuum, and tops.

3. **Refinery and other consumers' stocks:** Petroleum that has been delivered at refineries and at other points of consumption. Stocks of crude petroleum held at refineries are compiled by the Bureau of Mines.

PIPE-LINE AND TANK FARM STOCKS OF CRUDE PETROLEUM ON LAST DAY OF MONTH (Barrels)

Stocks are reported by fields of origin of oil, not by location of storage.

Domestic petroleum: East of California: Gross and net pipe line and tank farm stocks:		Jan. 31, 1924*	Feb. 29, 1924	Feb. 28, 1923
Appalachian—New York, Pennsylvania, West Virginia, Eastern and Central Ohio	Gross	6,758,000	6,670,000	6,360,000
	Net..	6,483,000	6,394,000	6,102,000
Kentucky	Gross	2,969,000	2,818,000	3,092,000
	Net..	2,847,000	2,696,000	2,979,000
Lima-Indiana	Gross	1,186,000	1,193,000	988,000
	Net..	950,000	957,000	729,000
Illinois-S. W. Indiana	Gross	11,519,000	11,456,000	10,722,000
	Net..	11,071,000	10,998,000	10,220,000
Mid-Continent— Oklahoma, Kansas, Cent. and North Texas	Gross	†179,426,000	178,930,000	146,271,000
	Net..	†168,182,000	167,507,000	135,359,000
Northern Louisiana and Arkansas	Gross	33,744,000	33,876,000	19,994,000
	Net..	31,864,000	31,985,000	19,267,000
Gulf Coast	Gross	23,936,000	24,015,000	24,491,000
	Net..	23,532,000	23,596,000	24,090,000
Rocky Mountain	Gross	‡21,449,000	22,919,000	5,074,000
	Net..	‡21,408,000	22,895,000	5,055,000
Total pipe line and tank farm stocks east of California	Gross	280,987,000	281,877,000	216,992,000
	Net..	266,337,000	267,028,000	203,801,000
California (as stated above)		63,314,000	63,151,000	52,085,000
Imported crude petroleum held in the United States by importers elsewhere than at refineries:				
At Atlantic Coast Stations:				
Crude petroleum		253,000	317,000	290,000
Topped oil topped in Mexico		2,225,000	2,643,000	2,805,000
At Gulf Coast Stations:				
Crude petroleum		957,000	919,000	423,000
Topped oil topped in Mexico		656,000	527,000	622,000
		4,091,000	4,406,000	4,140,000
Total domestic net pipe line and tank farm stocks east of California; producers', pipe line and tank farm stocks in California, plus stocks of imported crude petroleum held in the United States by importers elsewhere than at refineries		333,742,000	334,585,000	260,026,000

*Revised. †Includes 755,000 barrels of stocks not heretofore reported. ‡Includes 956,000 barrels of gross stocks and 948,000 barrels of net stocks not heretofore reported.

STOCKS OF CRUDE OIL AT REFINERIES IN UNITED STATES (Bureau of Mines) Barrels

	Dec. 31,1923	Jan. 31, 1924	Jan. 31, 1923
Domestic	29,756,235	30,195,798	19,639,779
Foreign	3,503,188	3,676,983	10,274,137
Total crude oil	33,259,423	33,872,781	29,913,916

IMPORTS AND EXPORTS OF CRUDE PETROLEUM (Barrels)
(From Bureau of Foreign and Domestic Commerce)

	January, 1924 Total	January, 1924 Daily average	February, 1924 Total	February, 1924 Daily average	Jan.-Feb. 1924	Jan.-Feb. 1923
Imports:*						
From Mexico	6,248,000	201,548	6,451,000	222,448	12,699,000	12,738,000
From other countries	55,000	1,774	60,000	2,069	115,000	768,000
Total	6,303,000	203,322	6,511,000	224,517	12,814,000	13,506,000
Exports:						
Domestic crude oil:						
To Canada	678,000	21,871	917,000	31,621	1,595,000	1,053,000
To other countries	802,000	25,871	740,000	25,517	1,542,000	346,000
Foreign crude oil	48,000	1,548	30,000	1,034	78,000	44,000
Total	1,528,000	49,290	1,687,000	58,172	3,215,000	1,443,000
Excess of imports over exports	4,775,000	154,032	4,824,000	166,345	9,599,000	12,063,000

*Includes some topped oil.

Cotton Valley Has Three Producing Wells; Haynesville Wrecked by Serious Wind Storm

Shreveport, La., March 31.—The Cotton Valley district is rapidly assuming the appearance of a real oil field, with three wells producing, two of which are connected to the pipe line. The Fortuna Oil Company made a pipe line run last week from its No. 1 Merritt, in section 14-21-10, which has now increased its flow to more than 200 barrels of oil per day, and the Ohio Oil Company's Merritt well in the same section, offsetting the Louisiana's discovery producer, has increased its production to around 50 barrels of oil per day. The Ohio's No. 2 Hodges, offsetting the Fortuna's well, has been drilled 13 feet deeper, to a total depth of 2533 feet, but it has remained shut in since it was tested the second time, when it sprayed some oil.

No new locations have been announced and although one or two new operations are in prospect, lease owners appear to be pursuing a policy of delay, each awaiting the other's first move.

Sarepta

Only disappointment resulted from the second test of Smitherman and McDonald's No. 1 Boucher, in section 21-23-11, of the Sarepta community, which was described in this column last week. A smaller string of casing was cemented in the second cap rock, below the upper gas sand, and strong hopes for discovery of oil were entertained, but, when drilled in, the well made only about 10,000,000 cubic feet of gas and about 5000 barrels of salt water per day.

Haynesville

A severe rain and windstorm, which swept the Haynesville field during the evening of Friday, March 28, caused the loss of around 300 derricks. The Ohio Oil Company lost 178 derricks, the Louisiana Oil Refining Corporation lost 38, the Gilliland Oil Company lost 34, and other operators report losses in proportion. It is estimated that the total amount of property damage, exclusive of the resulting losses in production, will approach a half million dollars.

Such losses are an annual occurence in the Louisiana fields, and operators usually make replacements with steel derricks, which offer less resistance to wind than do wooden derricks. The entire stock of steel derricks in North Louisiana had been bought up by nine o'clock Saturday morning. Steel derrick salesmen in Shreveport had everything their way on that date, which witnessed the unusual spectacle of purchasing agents rousting salesmen out of their beds at day break in their eagerness to place orders for quick delivery.

Reconstruction is already well under way and, although the well's production has been cut in half, today's reports reflect considerable improvement which is traceable to the resumption of operation of wells where the destruction of the derrick caused little or no damage to the rigs and engines.

The Ohio Oil Company's No. 1 Traylor, located in the southwest corner of the northeast quarter of section 13-23-8, on the eastern fringe of the Haynesville field. The Ohio Company has now built a derrick for another well on the Seegars property, along the northern edge of the proven field, to be located in the northeast corner of the northeast quarter of the southeast quarter of section 9-23-8.

Oakland

Only salt water resulted from the deep test made last week in the Gulf Refining Company's Security Trust well in section 23-23-1w, of Union Parish. Drilling was stopped at a total depth of 2435 feet, and casing was set at 2400 feet. The well was then drilled in and tested at a point eight feet below the casing seat and is now flowing salt water at the rate of about 400 barrels per day.

Another test is to be made very shortly in the Templeton well, drilled by Lide et al in the northeastern corner of the southeast quarter of the southwest quarter of section 18-23-1e, in which casing was cemented at 2172 feet.

Johnson and others are rigging up on a new location on the Pryor farm in the northeast corner of the northwest quarter of the southeast quarter and Allison and associates have driven a stake on the Heard property in the northeast quarter of the northwest quarter of section 25-23-1w.

The Urania Petroleum Company's third test in section 20-10-2e, near the town of Urania, in La Salle Parish, has been abandoned in salt water at 1620 feet. Previous wells drilled in this vicinity have shown oil in small quantities.

The Standard Oil Company is moving in a rig for the purpose of making a test on the McCloud property in the northwest corner of the northeast quarter of section 13-19-11, Bossier Parish, about one mile east of the Bellevue shallow field.

El Dorado Mecca of Rig Builders Since Bad Windstorm; Texas Alone in Price Reduction

El Dorado, Ark., March 31.—A destructive windstorm which swept the El Dorado and Smackover fields between 9 and 10 o'clock Friday evening caused the loss of several hundred derricks, which has resulted in a serious though temporary loss in production.

Local sources of supply have been swept clean of all steel derricks and derrick lumber, and derricks on a few wells have already been rebuilt. Rig builders are pouring in from all points in Texas, Louisiana and Oklahoma; and it is believed that reconstruction will be carried out in short order.

Neither the Standard nor the Louisiana, nor other purchasers of Smackover crudes have as yet met the ten and fifteen cent reduction posted by The Texas Pipe Line Company on March 24. There has been a noticeable slump in the demand for the heavy fuel oil grades, but the lighter gravities are being taken freely by all purchasers.

Activity in the Smackover fields continues brisk, and 200, 300 and 400 barrel wells are being brought in every day. A surprising number of new locations are being reported, also. A 150-barrel well was completed in the El Dorado field last week.

A flurry of excitement was caused last week by a report of the discovery of oil in the Fullenwilder wildcat, drilled by Dowdy et al, in section 12-17-22, near Magnolia, in Columbia County. Four feet of sand is logged in this well at a total depth of 2,234 feet, and considerable 27-gravity oil has been bailed from it. The liner is to be pulled and re-set, and a second test is to be made.

The Morgan-Pride Syndicate, which took over the Wesson well drilled by Leeper et al in section 23-15-19, Ouachita County, east of the Stephens Field, has hauled out a derrick pattern for a well to be drilled on the Green land, in the southeast corner of the northeast quarter of the southeast quarter of section 22 of the same township.

The Texas Company, having abandoned its first wildcat on the property of the Chicago Land & Timber Company, in section 14-6-13, has moved its rig to a second location on the same property, in section 16 of the same township.

Photo by Early Deane.

The Houston Oil Company's No. 2 Ballard, section 21-16-15, near Norphlett, Arkansas, finishing a 30-minute head early in March after having been completed in February.

Rotaries From Texas and Casing From Oklahoma Being Assembled for Spring Opening in Canada

Calgary, Alta., March 31.—After the long winter shut-down, there are signs of a general re-awakening of drilling activity in the Canadian West. This seems to be most marked in the east-central Alberta areas, where British Petroleums, Ltd., is now assembling material for its new tests, following up the oil production secured last year in No. 2 well, sec. 30-46-6w4. Two rotary outfits are being brought from Texas, a supply of casing from Oklahoma, and timber enough for four derricks and camp buildings is being shipped from Vancouver, B. C., as well as four boilers. No definite locations have been announced, but present plans contemplate four tests by this company.

Casing and tubing are also coming north from Edmonton for the Canadian Petroleums No. 2 well on sec. 12-85-21w5, in the Peace river district. This test, about 12 miles below Peace River town, has been drilling for several years, and is now resuming work at about 2,200 feet.

Imperial Oil, Ltd. is expected to resume active work in May. Coalspur No. 2 will start drilling in the foothills west of Edmonton this spring; and a little later a drilling crew will be sent north to resume work below Fort Norman. No other new activities have so far been inidicated by this company; but though about $4,000,000 has been already spent in the effort to develop commercial oil production in the Canadian West, the campaign will be aggressively continued during the coming season.

In the southern fields, the D. A. McDonald syndicate of Vancouver, B. C., will start new test this spring on the Milk River ridge south of Magrath, Alta. This area is a sort of extension of the Sweetgrass field; and the location will be somewhere on the McIntyre Ranching Company holdings. A standard outfit will be used. In the Okotoks field F. W. Haines, representing the Chicago interests which recently secured control of Southern Alberta Oils, Ltd., has arrived in Calgary to take charge of the projected new development work. This company has already some production from three or four deep wells; and a small refining plant. The properties will be put into shape and some new drilling may be done.

In Pakowki Lake district, the Sanctuary Oil Company, (Chester P. Thompson syndicate) test on sec. 9-5-8w4, shut down at 2,300 feet, is getting ready to resume, with Harry Norris of Sisterville, West Virginia in charge of the drilling operations. This well has a commercial gas production and is being deepened for oil.

In Many Island Lake district, the Sarnia Oil & Gas Company carbon black project will, it is understood, go ahead with construction work this spring. Prairie Oils, Ltd., capitalized at $200,000 with headquarters at Toronto has been organized to construct a carbon black plant in northern Alberta to utilize gas production near High Prairie. The company has already secured its carbon black permit from the Dominion government. The directorate includes Chas. Miller, president; E. W. Backus, vice president; B. D. McCaul, secretary; T. W. Horne, treasurer; and F. E. Davidson.

Further tar sand operations in the Athabaska field are also mooted. C. W. Van Burnt of Winnipeg is investigating a project to utilize the McMurray bitumen for the manufacture of prepared roofing, in place of Trinidad asphalt. A German syndicate headed by Dr. Ing. K. Glintz is undertaking development work on extensive holdings secured recently. The project, which will start actual work in May, contemplates the erection of a separation plant on the Athabaska, and of a plant for refining the oil and asphaltum at Edmonton.

STRIKE STOPS LINE

Mexico City, Mexico, March 26. — Work on the Mexican Eagle's pumping station at Chijol has been stopped by strikers at Tampico as has also work on the company's pipe line system covering some 400 miles according to advices received here.

California Gasoline and Kerosene Stocks Increase

Los Angeles, Calif., March 29. — Stocks of gasoline and kerosene at refineries in California showed a big increase during the month of February, according to the report compiled by C. E. Steidel of the Bureau of Mines.

During February, 41 refineries, with a daily capacity of 577,270 barrels, reported to the bureau. The plants reporting ran at 71.5 per cent capacity, running to still a daily average of 412,492 barrels of crude.

Gasoline output in month was 106,086,405 gallons, while production of engine distillate was 5,995,152 gallons. Stocks of gasoline at end of February in the state were 224,097,304 gallons, an increase of 22,815,417 gallons during the month.

Kerosene output during February was 23,387,949 gallons, while stocks increased 4,015,304 gallons to a total of 32,352,749 gallons. Gas and fuel oils output last month was 335,354,744 gallons. The stocks increased 34,058,306 gallons to a total of 695,067,631 gallons.

There was also an increase of 1,098,947 gallons of lubricants to a total stock of 15,418,917 gallons in the state.

Portability and Adaptability Preserved In Buildings Built of Junk Pipe Material

A PIPE line company in the Mid-Continent has successfully used junked pipe in erecting different buildings on its leases. The company has perfected a system of standardization to the point that buildings are taken apart and moved when needed, and pipe used in one building can be switched to another without difficulty.

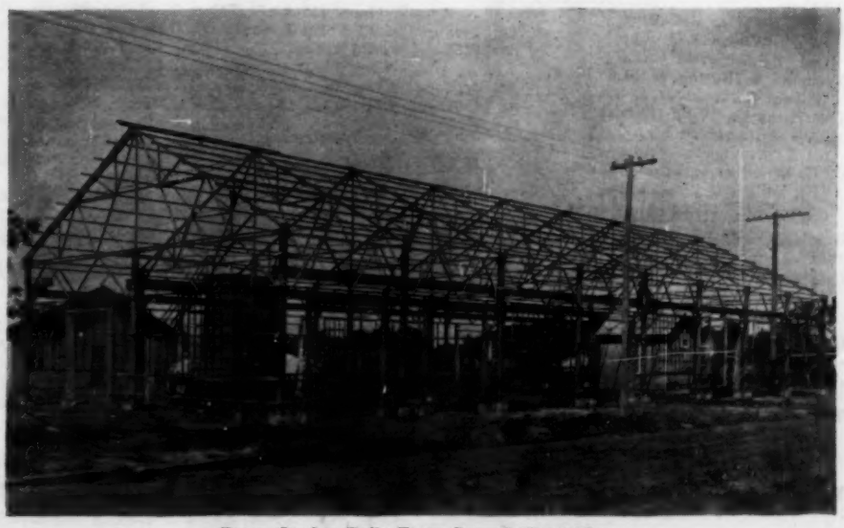
In erecting a pump station, the building can be made in the machine shop, moved to a location and erected. Welding is made on the main parts of the pipe—angle irons are welded on the places where the beams or rafters are to rest. Connecting pipes are riveted to the main frame of the building.

It is the general practice of this company to erect its pipe houses on concrete foundations. Concrete corner posts are sunk into the ground with bolts or rivets into them in order to receive the columns. The columns have a piece of boiler plate welded on the bottom for the bolts to go through.

In the accompanying illustration, no new material was used. All the pipe had served the purpose for which it was designed and then turned into the building. The columns of eight inch pipe were probably used for casing.

In designing a large building, portability and adaptability should be considered. There may be an occasion to move the building or make it smaller.

An old pump station can furnish enough material to build a tool house, a small manifold station, a warehouse, a garage and bunk house, by fitting the parts together in such a way that all material can be used.



Pump Station Built From Second Hand Pipe.

Completions for Past Week in U. S. Fields

Texas

ARCHER COUNTY

Company, Well, Location—	Initial Production Bbls.	Depth
Burns & Maxson's J. E. Parrish 2..	25	1588
Bridwell & Heydrick's L. F. Wilson 4	*	1650
Camp O. & G. Co. et al's L. F. Wilson 8-H	125	1605
L. F. Wilson 10-H	195	1595
Chambers & Dobbs et al's W. L. Andrews 1	*	960
Chenault et al's Richardson-Goldsmith 4	150	1340
J. H. Cavin et al's D. L. Bishop 1..	*	1455
Clark & McGee et al's Scruggs-Miller 2	110	1343
Empire Gas & Fuel Co.'s L. F. Wilson 7-B	220	1590
L. F. Wilson 3-C	320	1620
J. R. Parkey 1	*	2000
Gohlke et al's L. F. Wilson 2, (Blk 25)	50	1609
Holmes et al W. H. Thomas 1	*	1815
Kentucky Oil Corp. et al L. F. Wilson 3-D	210	1600
L. F. Wilson 3-E	275	1584
L. F. Wilson 5-E	230	1588
L. F. Wilson 6-E	135	1395
L. F. Wilson 2-F	†	1593
Lanning & Moninger et al W. F. Parrish 3	330	1595
W. F. Parrish 4	110	1596
Maer, Standiforth et al L. F. Wilson 4	45	1403
L. F. Wilson 5	155	1589
L .F. Wilson 6	110	1595
L. F. Wilson 7	65	1395
L. F. Wilson 8	.180	1589
K. & K. 1, (Blk. 63)	325	1489
Mutual Oil (Boller) Co. L. F. Wilson 10	300	1599
L. F. Wilson 13	200	1596
L. F. Wilson 14	300	1594
John O'Neil L. F. Wilson 1	125	1593
Panhandle & Duke Oil Co.:		
W. F. Parrish 2	20	1596
W. F. Parrish 3	40	1598
Petroleum Producers Co. L. F. Wilson 6-C	*	1430
R. M. F. Oil Co.:		
L. F. Wilson 5-A	300	1583
L. F. Wilson 4-D	90	1385
L. F. Wilson 8-D	75	1383
L. F. Wilson 25-D	410	1594
Riner & Bailey L. F. Wilson 3, (Blk 29)	480	1622
F. Scott et al Mrs. J. H. Carter 1..	40	1380
Sixty-Six Oil Co. L. F. Wilson 1-D	600	1620
Staley & Wynn et al L. F. Wilson 1-C	135	1599
Texhoma Oil & Ref. Co.:		
L. F. Wilson 9-D	20	1405
Geo. Parrish et al 1	*	1750
Texhoma & Burton & Ruff L. F. Wilson 4	*	1650
The Texas Co W. F. Parrish 12	40	1597
Tucker & Langford Mrs. J. H. Carter 1	60	1378
G. C. Wood et al L. F. Wilson 3..	220	1600

BURKBURNETT

Bradley Oil Co. J. Hirschi 22	50	1890
P. P. Langford et al Fee 8	30	1878
Perkins & Snider Serrien 7	25	1149

ELECTRA

Gulf Prod. Co. S. B. Burnett 20	20	1355
J. T. Harrell et al J. Seay 1	40	1220
J. J. Perkins et al S. B. Burnett 4..	20	1960
Rowe Drilling Co W. T. Waggoner 3	*	1986
Texhoma O. & R. Co. W. T. Waggoner 29-A	30	1510

K-M-A AND IOWA PARK

Electra Gulf Oil Co. J. A. Watkins 1	20	1505
Hill & Roberts W. W. Overby 2..	20	1520
Fisher Bros. Drilling Co. Clark 1	*	1425
Young Bros. & Kennedy Short et al 1	*	2005

YOUNG COUNTY

Empire Gas & Fuel Co. R. M. Williams 1	*	3055
McKenzie et al Hawkins 1	*	1275

DESDEMONA-GORMAN

Harrison et al Tidwell 2	*	3335

EASTLAND-RANGER

Schoonmacker et al Gilbert 2	15	515

STEPHENS COUNTY

Critten & Lacey S. C. Cobb 2	¶4-285	3305
Mid-Kansas Oil & Gas Co. Lowe 2.	110	3310
Quakins Pet. Co. Bruce 1	80	2090
Snowden & McSweeney Higginbotham 14	†	3315

CORSICANA-POWELL

J. K. Hughes Dev. Co. Alexander 1, wo	150	2983
Simms Oil Co. Kellum 5	800	3000
Tidal Oil Co. Ramsey "a"	90	1600
Gulf Prod. Co. Crews 20	1200	2985
Humble Oil & Ref. Co. Ramsey 16 "B"	525	2955
Mills-Bennett Woolens 3	7200	2981
Farrish, Watts & Collins Parker 1..	3000	2980

GULF COAST

Goose Creek—		
Humble Oil & Ref. Co. Simms Smith 54	*	2530
Gulf Prod. Co. Tabb Fee 12	100	3500
The Sun Co. B. Smith 17	200	2500
Spindle Top		
Unity Oil Co. McFadden 82	5	822
Hull—		
Houston Prod. Co.'s Taylor 2, wo..	270	2150
Link Oil Corp.'s Peveto 2, wo	100	3530
Republic Prod. Co.'s Dolbear 78	*	3680
Gulf Prod. Co.'s Phoenix Dev. Co. 35	500	3125
Orange—		
Humble Oil & Ref. Co.'s Chesson 20 "B"	15	3900
Mutual Oil Co.'s Chesson 8, wo	175	2765
Sun Co.'s Brown 3	4240	4620
Gulf Prod. Co.'s Hager Fee 12, wo..	115	3550

LULING

Caldwell County—		
Grayburg Oil Co.'s Tabor 9	300	....
United North & South Oil Co.'s Gideon 3	1000	....
Allen 3	1000	....
Allen 7	1000	....
Allen 8	8500	....

MIRANDO

Webb County—		
McCree Pet. Co.'s Boyd 8	5	....
Carnahan Prod & Ref. Co.'s 58	85	....
Quigg & Olsan's 1	*	1712
Andrews Pet. Co.'s Benavides 1	¶	....
Magnolia Oil Co.'s No. 19	5	....
Ochoa 2	100	....
Shasta Oil Co.'s Garcia 4	100	....
Chandler & Gear's Ochoa 3	150	....
Carnahan Prod. & Ref. Co.'s No. 57	50	....
Black Panther Oil Co.'s No. 7	250	....
Wheatley et al's Garcia 5	130	....
Laurel Oil Co.'s No. 3	pumping	....

SOUTH LOUISIANA

Vinton—		
Seiss Oil Synd.'s Green 8	50	2375
Gulf Ref. Co. of La.'s G. & N. G 59	50	2500

Oklahoma

Company, Well, Location—	Initial Production Bbls.	Depth
Carter County—		
Atlantic's Stanton 1, NW NE NW 25-2s-3w	40	3968
Nelson 1, NW NW NW 25-2s-3w	275	2245
Cobb Hamil 2, NE SW NW 5-3s-2w	250	2826
Merrick-Boyd's Fowler 1-A, NE NE SW 31-2s-3w	100	2982
Amster's Dolman 3, C NE NW SE 25-2s-3w	600	2279
Magnolia's Tucker 5, C SW NE SE 25-2s-3w	450	2725
Smith 2, SW SW SW 24-2s-3w	*	2088
Skelly Oil Co.'s Simpson 1, C NE NE NW 25-2s-3w	220	2160
Cotton Belt's Sparks 6, C SW NE SW 30-2s-2w	¶	2100
Recroot 4, NW NW SW 10-4s-2w	25	2310
Wert Franklin's Brooks 4, C NW NW NW 30-2s-2w	150	2439
Red Oak Oil Co.'s Moore 4, C NW SW SE 31-2s-2w	50	3162
Carter Oil Co.'s Noble 41, NW SE NW 21-4s-2w	2374	2891
Wolverine Oil Co.'s Dillard 22, SW SW NE 22-4s-2w	75	2570
Caddo County—		
Magnolia's Perry 2, NE SW NW 3-5n-9w	¶	2283
Cotton County—		
Prairie O. & G. Co.'s Brakhayer 1, SEc SW SE 20-1s-9w	*	2183
Brakhayer 3, SWc SE SE 20-1s-9w	*	2171
Creek County—		
Transcontinental's Freeman 2, SW cor SE SW 14-17-8	44	3140
Atlantic Oil Prod. Co.'s Fixico 1, SWc SE SE 29-16-8	18	3271
Prairie O. & G. Co.'s Kennal 4, NW NE SE 30-14-8	880	3406
Carter Oil Co.'s McDermott 1-A, NE cor NE NE 8-16-9	¶	3097
Kawfields No. 8, NWc NE 9-15-10.	15	2637
Empire's Barnett 1, NEc SW 31-14-10	75	2795
Skelly Oil Co.'s McIntosh 3, SEc NW SE 29-15-10	75	2630
Independent's Barnett 1, SEc SW NE 41-14-10	382	3455
Jackson & Wise's Hendricks 2, SW NE NW 21-16-9	125	3996
Grady County—		
Sinclair's Williams 2, C SW SE 11-4-8w	*	2209
Garvin County—		
Garland's Forman 1, NWc NE 27-2-1	*	2501
Hughes County—		
Borlein et al's Ramsey 1, NWc NE NE 32-7-8	*	2460
W. C. Newman's Stott 1, SEc SE SE 31-8-12	*	3727
Jefferson County—		
Clark, Cowden & Kilgore's No. 2, SW NW NW 26-5s6w	75	2099
Kay County—		
Marland Ref. Co.'s McMichael 1, SE cor SE NW 17-28-3	*	3720
Blackwell O. & G. Co.'s Geiger 1, SEc NE 9-27-1w	120	2366
Marland Ref. Co.'s 101 Ranch 1-A, C NW NW 20-25-2	15	3950
Amerada Pet. Co.'s Woods 13, SEc NW NE 34-25-1w	35	2175
Walters O. & G. Co.'s No. 1, C NW NE SW 11-25-1w	*	3510
Love County—		
Ambassador Oil Co.'s McLaren 1, NE NE NE 9-7s-1w	*	3002
Noble County—		
Comar Oil Co.'s Ellsworth 9-A, NWc SW NE 2-24-1w	95	2210

Company, Well, Location—	Initial Production Bbls.	Depth
Ellsworth 14, C S L NW NE 2-24-1w	574	2572
Healdton O. & G. Co.'s Rence 10, SWc NW 11-24-1w	¶	892
Marland & Cosden's School 9, SEc SE 16-24-1w	*	2105
Okmulgee County—		
Miller Bros.' & Killeblew's Thompson 1, NWc SE NW 36-11-13	*	2460
Osage County—		
Mid-Kansas' Rhodes 4, NE NW SE 9-27-5	1500	2958
Rhodes 5, NE NE SE 9-27-5	1000	2968
Comar Oil Co.'s Barnum 4, SE NE SW 10-27-5	10	3027
Barnum 6, NW NE SW 10-27-5	60	3017
Carter Oil Co.'s Clubb 4, NE NE NW 10-27-5	250	3025
Pappan 2, SE SW NW 3-27-5	132	3930
No. 7, C E L SE NE SW 12-26-6	245	2939
Phillips-Delmar No. 6, NEc NE SE 10-27-5	1400	3003
No 7, SE NE SE 10-27-5	1200	2988
No. 10, NE NW SE 10-27-5	2000	2989
Cosden O. & G. Co.'s Sands 12, NE SE NW 10-27-5	200	2958
Sands 2, SW SE NW 10-27-5	675	2981
Phillips Pet. Co.'s Cooper 7, SEc NW 3-27-5	*	1752
Cooper 8, SW SE NW 3-27-5	10	2960
Pappan 12, NW SE SE 4-27-5	250	3044
Taylor 11, SW SE NE 9-27-5	1000	2959
Taylor 15, SE NE NE 9-27-5	800	2945
Louis Friedman's No. 1, NWc NW 15-25-8	*	2915
Foster & Norwood's No. 42, C S L NE SE 23-24-9	150	2147
Tidal-Osage's No. 12, C W L NW SE NE 24-24-9	75	2153
No. 18, C S L NE NE 32-22-10	883	1954
No. 17, NW SW NW 34-22-10	90	2330
Winona Oil Co.'s No. 7, C N L NE SE 28-24-10	40	1368
Marland's No. 3-A, SWc SE 20-23-8	12	2932
Red Bank Oil Co.'s No. 4, C N L NE NW 29-23-8	2400	2792
No. 3, C E L NE NW 29-23-8	960	2860
White Oil Corp.'s No. 3, SEc SW SE 17-23-9	*	2640
Waite Phillips' No. 1, SEc SE SE 34-23-10	25	1780
Plymouth Pet. Co.'s No. 1, C W L NW NE 33-23-9	*	2200
Mutual Oil Co.'s No. 5, SEc SE 2-22-10	2245	2150
No. 1, NEc NE SW 28-20-12	500	2065
No. 5, SEc SE NW 28-20-12	1075	2033
No. 8, NWc NE NE 28-20-12	*	2330
Steinberg & Lucas et al's No. 4, SWc NW SE 19-22-11	*	1955
J. C. Stine's No. 1, C SE SW 19-21-12	10	1322
Oswego Pet. Co.'s No. 3, C N L NW SW 16-21-12	8	1422
Verland Oil Co.'s No. 6, SEc SW NE 17-21-12	8	1403
Gillespie's No. 22-A, C N L SE NE NE 8-20-12	160	2083
Okla. Nat. Gas Co.'s No. 637, SEc NW SE 20-20-12	¶	1324
The Texas Co.'s Monroe 3, NEc NE SW 3-27-5	720	3930
No. 4, SEc SW 3-27-5	150	2955
No. 5, NE SE SW 3-27-5	480	2940
No. 7, C W L SW NW NW 3-27-5	120	2920
Pawhuska O. & G. Co.'s No. 8, C S L SE NE SE 17-25-9	¶	1663
Payne County—		
Okla. P. & R. Co.'s Weir 1, SWc NW NW 8-18-4	3	3680
Pawnee County—		
Magnolia's Roberdeaux 1, SWc SW 32-23-3	*	4171
Watchorn's Miller 3, C S L NW SW 32-23-3	660	4117
Brown 1, SWc NE 33-23-3	*	2170
Diamond 6, NE NE NW 4-22-3	¶	2034
Seminole County—		
Shaffer Oil Co.'s Little 1, SE NW NE 10-10-8	¶	1716
Tidal-Osage's Harjo 1, SEc NE 21-10-8	840	3455
United States Oil Co.'s Purdy 1, SE NE 18-6-7	*	720
W. E. Haley's Love 1, SWc NE 14-7-7	*	1750
Cosden O. & G. Co.'s Willis 2, SWc SE NW 15-10-8	38	3464
Wilcox O. & G. Co.'s Bruner 1, NW cor SE SW 15-10-8	110	3474
Gessel Drlg. Co.'s Stidham 1, NEc SE NE 16-10-8	4750	3507
Dixie Oil Co.'s Foster 5, NE SW SW 28-8-8	50	3172
Cromwell et al's Bruner 1, NWc NE SW 15-10-8	267	3492
Stephens County—		
Magnolia's Edwards 3, C W L NW NW 20-1s-8w	¶	2086
Marx 1, C E½ NE SE 13-2s-8w	¶	1250
Leonard 1, SEc NE 6-1s-8w	*	2614
Ott 1, NW SW NW 4-3s-6w	*	2980
Avant & Anderson's Wilson 1, NE NW SE 17-2s-7w	60	1452
Mid-Kansas' Brostow 5-A, NW NW SW 18-2s-7w	8	1249
I. R. McQueen's Rockwood 7, NEc SW SW 20-1s-8w	60	2291
Joe Ball et al's Thompson 7, SWc NW NE 32-1s-8w	15	2007

Kansas

Company, Well, Location—	Initial Production Bbls.	Depth
Cowley County—		
Lewis Oil Co.'s Elliott 1, SEc SW SE 31-30-6	50	2868
Shawver et al's Sams 1, SEc NE NW 5-31-6	*	2890
Greenwood County—		
Braden Bros.' Morris 3, NWc SE SE 27-22-13	15	1715
Empire's Hines 3, C SE SE SW 11-22-11	200	1918
Theta Oil Co.'s Esslinger 8, C SW SE 34-22-13	6	1830
Schneider 17, C SW 10-23-13	20	1797
Shaffer Oil Co.'s Shindler 9, SWc SW 15-23-13	250	1584
Fisher, Louch & Moore's Edwards 2, C SE NE SW 8-23-11	*	2136
Lyon County—		
A. N. Buck et al's McCray 1, SEc NW 34-21-10	*	2245

California

Company, Well, Location—	Initial Production Bbls.	Depth
Torrance—		
Standard's Marble fee 4	300	3764
McKeon Dr. Co.'s Campbell 1	700	3780
Shell Co.'s Marsh 1-A	800	3904
Geo. F. Getty's Torrance 17	75	3770
General Pet. Co.'s Carson 3	130	3300
E. J. Miley's 2	1075	3912
Petroleum Securities. Marble 15	1000	3795
Pan American's Knapp 1	400	3890
C. C. M. Oil Co.'s Torrance 36	1500	3725
Superior Oil Co.'s Torrance 17	400	3868
Kinsie-Jennings' Rhoads 1	100	3800
Bush Voorheis' Washburn 1	350	3825
Standard's Marble Fee 2	400	3697
Marble Fee 3	1400	3734
Equitable Oil Co.'s No. 1	300	3796
Dabney Delany's Lomita 1	100	3755
Petroleum Securities' Marble 20	900	3725
Marble 27	1050	3736
U. S. Royalties' No. 20	800	3825
No. 21	345	3787
No. 22	800	3838
Union Dr. & Pet. Corp.'s Perkins 1	100	3778
Superior Oil Co.'s Joughlin 16	500	3842
Keefe & Risdon's Gildner 1	700	3794
Standard's Interstate 2	600	3850
Catalina View's No. 1	650	3788
Long Beach—		
Hope Oil Co.'s 1	500	4915
Bolsa Chica Oil Co.'s 1	100	4800
Bonded Oil Synd.'s No. 1	200	4632
Petroleum Midway's Walker 2	830	4634

Company, Well, Location	Initial Production Barrels	Depth
Santa Fe Springs—		
Commodore Oil Co.'s Land 2	160	4679
Standard's Jordan 5	525	4670
Wilshire Oil Co.'s Baker 3	1700	4600
Standard's Sanchez 1-A, wo	30	4789
Santa Gertrudes 7	60	4650
Wheeler Ridge—		
Standard's No. 8	100	2725
Taft—		
Petroleum Midway's No. 5, Sec. 24-31-23	1100	3408
Dominguez—		
Union Oil Co.'s Carson 1	5000	4231

Louisiana

Bellevue Field—		
Humble O. & R. Co.'s Bliss & Weatherbee 18, 15-19-11	25	400
R. O. Roy & Co.'s Scanlan 21, 15-19-11	5	402
Standard Oil Co.'s Bliss & Weatherbee 12, 10-19-11	1	435
Total, 3 wells	31	
Caddo Parish—		
Tarver Oil Co.'s Huckaby 5, 14-21-15	25	1673
Haynesville Field—		
Ohio Oil Co.'s Traylor 1, 13-23-8	*	2830
Monroe Gas Field—		
Southern Carbon Co.'s Fairbanks 7, 5-19-4e	¶22	2127
W. Va. Land & Timber Co.'s Fee 3, 4-18-5e	*	2226
Total, 2 wells	¶22	

Arkansas

Smackover Field, Ouachita County—		
Atlantic Oil Prod. Co.'s Rowland A-3, 29-15-16	300	2328
Wells A-3, 25-15-17	40	2328
Bashara et al's W. F. Patton 2, 31-15-16	70	2282
Gilliland Oil Co.'s Myar 3, 30-15-16	150	2278

Strong Safe Speedy

To provide strength and safety with ease in handling which makes for speed, we offer the

Standard Safety Sucker Rod Elevator

It will not let go once the rod is in the elevator. Easy to operate on and off the rods. Adds to pumping efficiency.

"Quality First"

D & B Pump and Supply Co.

301 West Avenue 26, Los Angeles, Calif.
Factory Branch:
P. O Box 1033, Dallas, Texas

Company, Well and Location	Initial Production Bbls.	Depth
Gulf Ref. Co.'s Bennett 1, 32-15-15	¶35	2264
Harris 6, 30-15-16	150	2291
Meekin 3, 29-15-16	50	2312
Meekin 4, 29-15-16	100	2322
Umstead A-5, 33-15-15	90	2000
Keene & Wolf's Myar 6, 32-15-16	40	2248
Knox et al's Shirley-Berg 2, 29-15-16	225	2305
Magnolia Pet. Co.'s Smith B-5, 31-15-16	25	2239
Mid-Continent Pet. Trust's Shirley-Berg 3, 29-15-16	100	2293
Simmons et al's Shirley-Berg 1, 29-15-16	*	2258
Smith Ref. Co.'s Patton 6, 31-15-16	75	2278
Snowden & McSweeney's Taylor 5, 29-15-16	200	2293
Standard Oil Co.'s Minor 2, 21-15-16	200	2314
The Texas Co.'s Chandler B-2, 30-15-16	150	2308
W. A. Smith 2, 31-15-16	100	2252
Solmson A-6, 29-15-16	100	2303
Solmson A-8, 29-15-16	200	2307
Smackover Field, Union County—		
Ark. Fuel Oil Co.'s LaGrone 1, 1-16-17	40	2253
J. W. Clark et al's Cook 5, 17-16-15	300	2090
Smith 2, 16-16-15	60	2070
Estes et al's McGraw 3, 1-16-17	30	2260
Gulf Ref. Co.'s Alphin 6, 11-16-15	100	2000
Murphy 2, 7-16-15	75	2064
Humphries Oil Co.'s Hayes 2, 21-16-15	200	2031
Imperial O. & G. Co.'s G. T. Murphy 1, 7-16-15	140	2097
Lion Oil & Ref. Co.'s G. T. Murphy 1, 18-16-15	200	2074
Pure Oil Co.'s Craig 6, 15-16-15	150	2016
Smitherman & McDonald's Saxon A-4, 32-15-16	90	2259
Standard Oil Co.'s Lingelbach 5, 22-16-15	125	2020
Total, 33 wells	¶35-3875	
El Dorado East Field, Union Co.—		
Mercury Oil Co.'s Stevens 1, 7-17-14	150	2150

The SPENGLER METHOD of Taking a Core

The Spengler patented core barrel cuts a full gauge hole, and eliminates reaming of core barrel holes after core has been taken, and thereby

SAVES 5 TO 12 HOURS DRILLING TIME

This saving in time when a core is taken by the Spengler method, ranges from 5 to 12 hours; time that was a dead loss.

Spengler Cores are as near perfect as a core can be. There are many advantages of the Spengler method that you should know about.

SPENGLER CORE DRILLING CO.

1036 A. G. Bartlett Bldg. Phone Met. 7714 Los Angeles, California

Long Beach, Elm and Frankfort, Phones 618-339, or 653-474 — Torrance, 2013 Arlington, Phone 140-J — Santa Fe Springs, Phone Whittier R 238

PIONEER TANK & BOILER COMPANY

A New Name for an Old Friend

WHAT'S in a name, anyway? The refinery construction work we are doing under the name "Pioneer" is just the same high grade as when it bore the name "Tulsa Boiler and Sheet Iron."

For eighteen years, as the "Tulsa Boiler and Sheet Iron Works" we have turned out tanks and refinery steel construction that made good friends for us among the wise buyers of the Mid-Continent. We pioneered in giving these people "close to home" service on the best kind of work.

Now, under the new name, The Pioneer Tank and Boiler Company, we're all set with the men, machinery and money to keep on growing under the Pioneer banner like we did when Tulsa Boiler and Sheet Iron was on our letterhead.

There is no change in our organization.

Get Pioneer quotations on tank and refinery construction work.

PIONEER TANK & BOILER COMPANY
(Formerly Tulsa Boiler and Sheet Iron Works)
Box 1936, TULSA, OKLA.

Eastern States

PENNSYLVANIA

Company, Well, Location—	Initial Production Bbls.	Depth
Greene County—		
Carnegie Nat. Gas Co. L. Cowell 1	¶2½	....
Mfrs. Light & Heat Co. A. Owens 3	¶2	....

NEW YORK

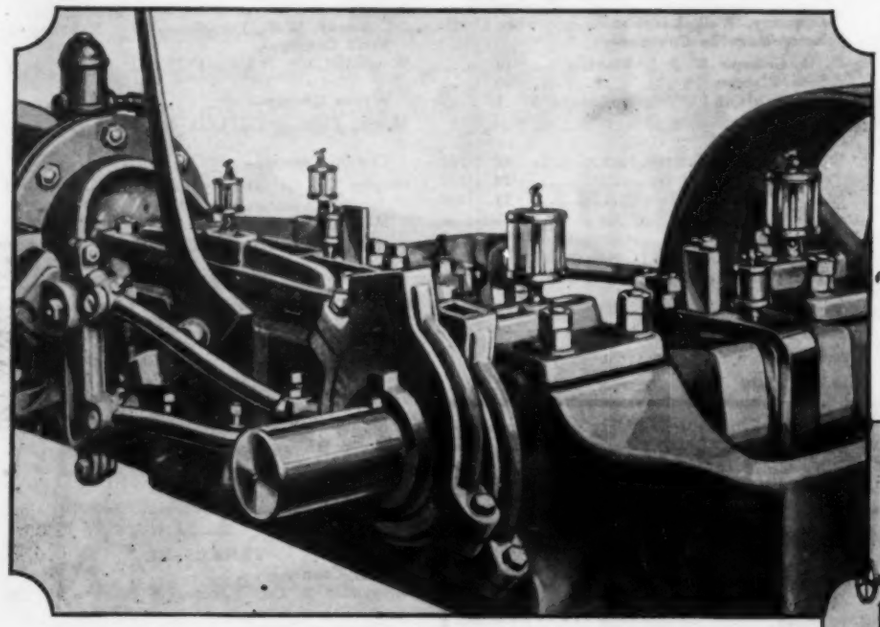
Bolivar Field—		
Brown, Birtell & Co. Fritts 1	17	....
Sawyer & Hibbard Merritt 1	10	....
A. L. Shaner Greeley 1	7	....
Victory Oil Co. Whitcomb lot 1	7	....
Sawnett Oil Co. Jones 1	¶¼	....

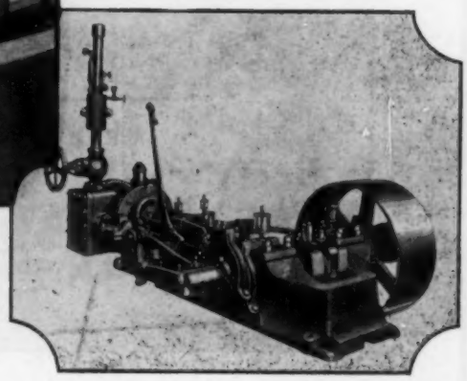
WEST VIRGINIA

Calhoun County—		
Chemical Oil Co. A. C. Fisher 12	¶3	....
South Penn Oil Co. A. W. Saunders 1	¶3	....
Hope Nat. Gas Co. Owen Hicks 1	¶1½	....
Chenoweth 1	¶1½	....
W. A. Bickel G. S. Smith 2	¶1	....
J. A. Rusmessel & Co. Stattler 1	¶3	....
Ritchie County—		
Dave French & Co. J. M. Cassidy 1	5	....
Mellon Bros. A. J. Noll 5	¶3½	....
Roberts & Hays C. Hardick 1	5	....
Carnegie Nat. Gas Co. A. Burrows 1	¶2	....
John Locke J. A. Hall 1	*	....
Marion County—		
Peerless Oil Co. R. L. Toothman 2	2	3175
Owens Bottle Machine Co. E. J. Hill 1	¶3	....
E. J. Hill 2	¶3½	....
Carnegie Nat. Gas Co. J. D. Wolfe 1	¶3	....
Harrison County—		
Hope Nat. Gas Co. D. M. Cole 1	¶2	4530
Jess F. Randolph Randolph 2	5	....
Wirt County—		
Heasley Oil & Gas Co. G. W. Righter 5	3	....
H. P. Camden & Co. Newton Lamb 1	¶2	....
Kanawha County—		
South Penn Oil Co. C. Skinner 1	¶2	....
R. O. Baillie 4	¶1	2743
Gilmer County—		
Pittsburgh-West Virginia Gas Co. F. Woodford 1	¶3	....
Star Oil & Gas Co. C. Woofter 1	¶2½	....
Wetzel County—		
Orondoff Oil & Gas Co. J. B. Pettitt 1	¶2	....
Mfrs. Light & Heat Co. C. Bargey 1	¶2	....
Cabell County—		
Nowry & Wilson W. O. Walton 1	¶¼	....
Boone County—		
South Penn Oil Co. Price Branch 1	¶½	....
Doddridge County—		
Carter Oil Co. D. P. Stout 13	*	....

KENTUCKY

Owensboro Field—		
Randolph & Stevenson Abe Howe 3	35	712
Kentucky Oil Co. A. Stewart 11	15	436
Panther Creek Oil Co. R. Miller 5	10	726
C. E. Daugherty & Co. Heibert School lot 1	8	482
Dearborn Oil Co. J. M. Reardon 1	6	754
Newton Oil & Daugherty 2	3	486
Newton Oil Co. Bickell 1	3	406
Leeper Oil Co. L. Helm 3	*	750
Warren County—		
Wiles & Co. G. Smith 3	100	685
E. M. Treat & Co. Sebe Smith 20	6	1019
C. L. Turner McLemore 3	3	500
Jackson Oil Co. Jim Jones 4	*	1050
Makeever Bros. A. Shields 15	*	548





Compare the Mechanical Refinements of Ajax

Note the Ajax main bearings—their ample size and superior fitting. Note the increased number of sight feed oilers and large oil pockets. The eccentric straps are ground to close limits and are shimmed to facilitate exact adjustment. This feature makes certain perfect valve operation and alignment after years of wear.

This precision of manufacture makes Ajax Engines easier to handle and more responsive.

Distributed by
National Supply Companies
In every oil field

Manufactured by
Ajax Iron Works
Corry, Pa.

3465

AJAX DRILLING ENGINES

Insist on Genuine Ajax Replacement Parts

Company, Well, Location	Initial Production Bbls.	Depth
Farmers Oil & Gas Co. Bratcher 1..	*	1442
Elliott County—		
Little Sandy Oil Co. Ves Peters 1	10	....
Ves Peters 2	10	....
Ves Peters 3	10	....
Campbell & Wheeler Dred Dials 1	¶1	....
Chambers & Co. R. B. Alderson 15	25	325
Dobie & Co. M. Claburn 2	1	530
Beals & Freeman Ewing 9	*	325
R. A. Gluck Unknown 1	*	....
Lawrence-Johnson Counties—		
Union Gas & Oil Co. James Dials 3	25	820
George & Touma L. D. Holbrook 2	4	900
Cheuvront & Stephenson Mary Holbrook 1	3	900
Johnson-Magoffin Counties—		
R. G. Gillespie S. & J. Blanton 9..	10	....
Sam Blanton 14	10	....
Mid South Oil Co. Steve Howard 3	5	....
Barren County—		
Smith & Son Nichols 3	12	382
Fred Moore Travis 2	20	532
Strader Bros. Strader 4	¶1	400
Lee County—		
Superior Oil Corp. J. D. Smythe 16	8	....
J. D. Smythe 17	10	...
Monroe County—		
Turner & English Turner 1	*	....
Smith 1	*	....
Estill County—		
Wood Oil Co. Rogers 1	10	2651
Wayne County—		
Marsh, Elam & Co. J. G. Elam 4..	*	....
Clinton County—		
Shipley Oil Co. Dr. Ryan 1	*	950
McLean County—		
Petroleum Extraction Co. Fulkerson 1	*	1005
Henderson County—		
Penn-Indiana Oil Co. Graham 1	*	2200
Grayson County—		
M. B. Lyles Cincinnati Cribbage 1	*	....
Marion County—		
Kokomo Drilling Co. Near Calvary 1	*	....
Todd County—		
Unknown, Elkton 1	*	....
TENNESSEE		
Clay County—		
Alexander & Co. Marcum 4	*	226
Cheatham County—		
Unknown, Wildcat 1	*	1200
Davidson County—		
Lindsay Oil Synd. Sallie Stevens 1	*	....
SOUTHEASTERN OHIO		
Washington County—		
O. D. Jones Carrie Bartile 10	5	....
W. A. Dauber & Co. George Morrow 8	3	....
B. B. Putnam Lillie Ripley 1	2	....
Edward Leonhart & Co. J. Schiffel 1	*	500
John Allhouse Atkinson Heirs 2	2	....
Noble County—		
J. H. Yearian & Co. Kirkbride 1	*	....
J. C. Dinsmor Estate A. C. Weisant 7	2	700
W. L. Clark & Co. L. Mohler 14..	7	500
Cain-Devall Oil Co. L. H. Devall 6	*	....
Jerry Buckley & Co. Kickbacher 3	2	....
Morgan County—		
Morgan Petroleum Co. Unknown 22	2	....
George W. Lovell & Co. Patterson 8	2	....
Muskingum County—		
Carter Oil Co. R. R. Bart 2	3	....
Swingle Oil & Gas Co. A. B. Dozier 1	*	....
Monroe County—		
Bentz Oil & Gas Co. J. K. Howell 1	10	....
CENTRAL OHIO		
Richland County—		
C. E. Ozier & Co. Seeman 9	¶1	....
Seeman 10	¶1	....
Davidson & Co. Steele-McBride 3..	¶1	....
Van Tilburg & Co. Geiger 3	¶1	....
Pettitt 2	¶2	....
Hulse & Kundtz Myers 2	¶1	....
Cuppler & Co. Barnes 4	¶½	....
Benjamine Hart Maring 3	¶1½	....
Weideman & Co. Malone 3	¶1½	....
Noble & Co. Noble 3	¶1	....
Henline, Brown & Co. Champion 4..	¶1½	....
Hocking County—		
Preston Oil Co. J. & T. Stone 10	60	....
Sharon Oil Co. S. J. Staley 3	¶¼	..
Ohio Fuel Gas Co. C. Johnson 1..	*	....
Melcher & Co. C. P. Stacey 1	¶½	....
Sharon Oil Co. S. J. Stacey 1	¶½	....
S. Stacey 2	¶1	....
Athens County—		
Stewart Gas Co. Cunningham 1	¶¼	671
Neally & Co. C. Atkinson 1	5	....
Citizens Nat. Bank Co. Pearl Jewell 3	2	....
Federal Oil Co. H. M. Wart 1	*	....

IMPERIAL

Portable Automatic

Acetylene Generator

The Imperial Type B is the only portable acetylene generator practical for carrying along in laying pipe lines.

Generates gas 3 to 5 cents cheaper per cubic foot than you can buy it in cylinders. Eliminates delays and the expense of drayage and express.

Generation is entirely automatic. When you light your torch it begins, when you shut off torch, it stops. Carbide to water type; medium pressure; made in 15, 25 and 50 pound sizes.

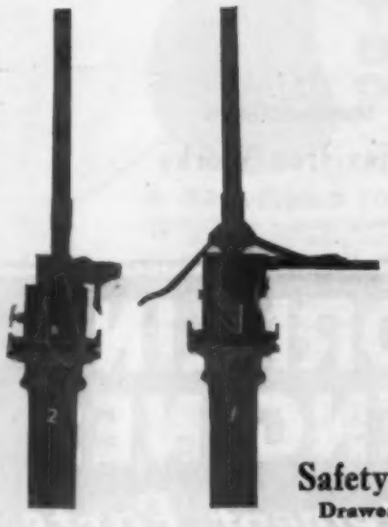
Write for complete catalogue showing complete line of Welding and Cutting Equipment and Supplies.

IMPERIAL BRASS MFG. COMPANY

1221 W. Harrison St. **Chicago, Ill.**

New Elevator Support and Release

(Patented)



Stop Lifting Your Tubing to Make Your Kick-off!

Note Drawing No. 1 with elevator on top. The operator applies the brake. Push handle to right.

Note position of tool in Drawing No. 2. String of tubing hanging on pulling machine. Take Elevator off.

Write for complete details

Manufactured by

Safety Pulling Machine Company

Drawer A **Independence, Kansas**

Company, Well, Location	Initial Production Bbls.	Depth
Wayne County—		
Ohio Fuel Gas Co. Zimmerman 1..	*	....
C. Bersch 1	*	....
Logan Gas Co. B. H. Edmonds 1...	¶1	....
C. Garn 1	¶1	....
Knox County—		
Heisey Gas Co. C. C. Green 4.....	¶¼	.. .
Knox-Wood Oil Co. Divan 2	*	...
Rohrer & Snyder H. L. Green 6...	3	....
Medina County—		
Central Ohio Gas Co. C. Biddle 1..	*	....
A. A. Cameron & Co. R. Albert 1..	*	....
Mayes & Co. M. E. Cole 1.....	*	....
Perry County—		
Ohio Fuel Gas Co. D. W. Baker 2..	30	....
Edgar Denman & Co. Burns Heirs 4	15	....
Licking County—		
Wehrle Stove Co. F. Darnes 1....	3	....
Pure Oil Co. M. Nethers 1	*	....
Ashland County—		
East Ohio Gas Co. J. Hans 1 ....¶1½		....
Meigs County—		
Ohio Fuel Supply Co. W. H. Nease 1	¶¼	....
Jackson Conuty—		
Ohio Fuel Gas Co. J. Buckley 1....	¶½	....
NORTHWESTERN OHIO		
Mercer County—		
Carter Oil Co. M. Fletcher 1.....	*	1500
Big Four Oil Co. Bollenbacher 1...	10	1298
Celine Pet. Co. Hank Linn 1.....	15	1288
Shilling & Kinstle J. A. Schmidtt 1	2	1300
Paulding County—		
U. S. A. Oil Co. William King 1..	25	1440
William King 2	25	1440
William King 3	50	1440
Hancock County—		
Harpst Bros. H. Schwinn 12.....	20	1337
Ohio Oil Co. W. S. Warner 10	4	1341
H. McMurray 33	1	1500
Allen County—		
South Fork Oil Co. C. E. Wisher 2	20	1335
Federal Oil Co. F. Miller 3.....	8	1349
Wood County—		
Matthew Smith Charles Richard 1 ..	10	1350
G. Mays & Co. G. Bachman 2	*	1492
Hardin County—		
Schmidt & Co. John Way 1 .....¶1½		1435
Lee Darby 1 .....¶1½		1430
Darke County—		
E. G. Henderson & Co. John Miller 9	20	1299
Ottawa County—		
Zorn-Hornung Oil Co. Mary Schott 6	30	1329
Auglaize County—		
Wesley Sprague W. Gochenour 1..	10	1334
Lucas County—		
Bob G. Stitt S. J. Carroll 1 ..... ¶¼		1213
INDIANA		
Jay County—		
Nasters & Colt Ritenour 17	200	....
Pike County—		
Peoples Pet. Co. M. Ingler 7	5	1040
Wells County—		
Hartford Oil & Gas Co. C. Ford 1	*	1289
ILLINOIS		
Clark County—		
Cincho Oil Co. E. Lee 4	*	495
Coles County—		
Appleman & Co. C. Goble 1.....	*	1200

Looks simple—and is!

The Safety Latch lifts up readily, but no amount of pressure from the elevator bails can PUSH it up.

For sale by dealers in your field. Write the distributors for folder.

CAN YOU THINK of any reason why a Sucker Rod Hook should be a complicated thing, least of all a SAFE Sucker Rod Hook? Look at this Stewart Hook! No trigger work, no latches or catches or handles. Just plain, strong, simple Sucker Rod Hook, with a safety device that lifts readily but cannot be PUSHED up by the load on the inside.

As a matter of fact, the harder the load tries to jump out, the tighter it's held—like sailor knots you've seen.

You ought to have one of these hooks. They are made by the Pelican Well Tool and Supply Company, at Shreveport, Louisiana, who make a lot of good oil country equipment. But the hooks are for sale at supply stores in the field.

If your store doesn't have them, write us for a descriptive folder and we'll tell you who does carry them in your territory.

WALTER O'BANNON CO.

Sole Distributors

817 East First Street,
Tulsa, Oklahoma.

OILFIELD MAPS FOR SALE

We have on hand ready for immediate delivery maps of Reagan and Crockett Counties, showing drilling wells, producing wells, gas wells, dry holes, abandoned wells, rigs up, etc. The size of these maps is about 30 by 40 inches.

Price each, postpaid, $3.00

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POST OFFICE BOX 1307 **HOUSTON, TEXAS**

The Goal

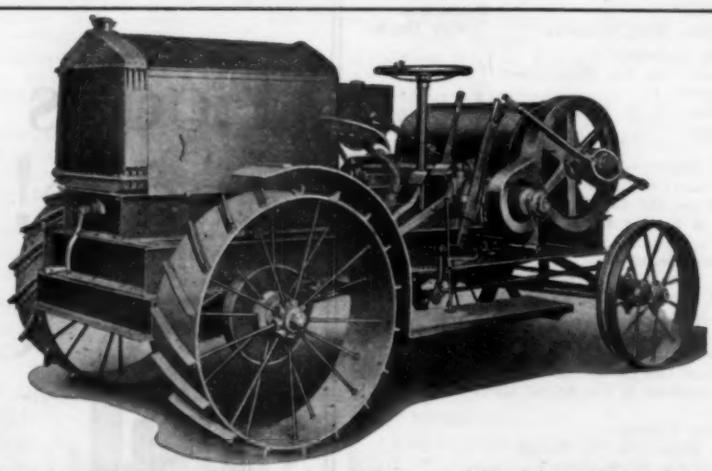
A LEADING American Engineer says that men manage to put over modern miracles of science and industry because they keep their eyes eternally fixed on a goal—in the distance, avoiding "wasteful thinking and wasteful wandering."

Saving and doing go hand in hand.

If you have a goal, we'd like to help you reach it.

A Bank of Personal Service

Commercial National Bank
Shreveport, La.



Tractor Rod and Tube Pulling and Bailing Machine

"Built for Your Job"

In the Oil Fields this machine will cut your operating cost and make you more profit. The operating levers centrally located gives the operator perfect control of the load being handled.

Three speeds on the spool makes possible a fast and slow movement in pulling, so that the right power can be applied as needed. Having your machine equipped with a pulley or sprocket enables you to use your machine for other purposes.

A drawbar is provided upon the rear of the machine for the hauling of a trailer.

A bulletin will be sent upon request giving you the specifications of these machines.

Patents Applied For and Pending

MYRICK MACHINE COMPANY
OLEAN, N. Y.

HOPE BUILT REEVES ENGINES AND The Price Question

WE can not offer you a cut price combination gas engine gas compressor but we will gladly discuss with you the merits of a well built vertical unit which because of its weight, small foundation and floor space can secure for you a saving in the total cost of a complete station.

Consulting and Contracting Engineers in Natural Gas and Oil

HOPE ENGINEERING & SUPPLY CO.
Mt. Vernon, Ohio, U.S.A.

Branches Pittsburgh, Penna. Tulsa, Okla. Casper, Wyo.

Permits Granted and Locations for New Wells

(Oklahoma—Texas—Arkansas—Louisiana)

OKLAHOMA

Seminole County—Gypsy Oil Co. No. 7 Stidham, center of the northeast of the southwest of the northwest of 15-10-8; Gypsy No. 8, Bruner, center of the southwest of the northwest of the southwest of 15-10-8. Mid-Kansas Oil & Gas Co. No. 2 Alexander, center of the southeast of the northwest of the northwest of 15-10-8. Amerada Pet. Corp. No. 2 C. Bruner, center of the southeast of the northeast of the southeast of 16-10-8. T. B. Hoffer and others No. 3 Stidham, center of the northwest of the southeast of the northeast of 16-10-8; T. B. Slick No. 2 Mingo, center of the southeast of the northwest of 25-6-6.

Lincoln County—Magnolia Pet. Co.'s No. 1 Dodrill, center of the northeast of the northeast of the southwest of 32-15-4e.

Okmulgee County—Atlas Oil Co.'s No. 2, center of the northeast of the northwest of 21-16-14. Central National Oil Co.'s No. 1 Wilson, southeast corner of the northeast of 8-13-11. Misener and others No. 2 Love, center of the south line of the northwest of the northeast of 16-14-14. Vensel & Elliott's No. 8 Dewey Harrison, northwest corner of the southeast of the southwest of 18-15-14.

Okfuskee County—Denver Prod. & Ref. Co.'s No. 1 Sears, center of the north line of the southwest of the southwest of 5-11-11. Cusack and others No. 5 M. Hopgood, southeast corner of the northwest of the northeast of 11-11-11,. Burk-Greis Oil Co.'s No. 1 Nivens, southwest corner of the northwest of the northwest of 28-12-10.

Tulsa County—Fan Elva Oil Co.'s No. 3, scuthwest corner of the southeast of the southeast of 18-19-10. Wilson and others No. 1, northeast corner of the southeast of the southeast of 5-9-12. Charles Page No. 1 Brown, center of the north line of the southeast of the southeast of 6-19-12. Many Oil & Gas Co.'s No. 4 Berryhill, northwest corner of the northeast of the northeast of 7-19-12. Charles Page No. 1 McIntosh, northwest corner of the southwest of the northeast of 7-19-12.

Kay County—Alcorn Oil Co.'s No. 1 McCullough, center of the north line of the southwest of 12-26-2w. Vernon Oil & Gas Co.'s No. 1 Bradley, center of the northeast ten acres of 20-29-1e. Otstot Dev. Co.'s No. 1 school land, scutheast corner of the northwest of 16-27-1w.

Osage County—Barnsdall Oil Co.'s No. 24, C W L E½ W½ NW 9-20-12. Markham Breene No. 8, SW NW 5-21-11. Marland Oil Co.'s No. 1, NE NW SW 2-22-7; Hegeman-Davis No. 1, SW NW SW SW 35-23-10; Hegeman-Davis No. 2, SWc 35-23-10; A. G. Oliphant No. 3, NW SW NW SW 32-24-9; New England No. 9, SW NE SW SW 19-25-9. Devonian Oil Co.'s No. 9, SW NE SW SW 34-25-11; Devonian Oil Co.'s No. 10, NE SE NE NW 34-25-11; Midland-Delmar No. 1, SEc SE 13-27-5; No. 2, C SW SE SE 13-27-5; No. 3-C, CE SW SE 13-27-5; No. 4, SW SE 13-27-5; No. 5, C NW SW SE 13-27-5; No. 6-C, NE SW SE 13-27-5; No. 7-C, NW SE SE 13-27-5; No. 8-C, NE SE SE 13-27-5; No. 9-C, SW NE SE 13-27-5; No. 10-C, SW NE SE 13-27-5; No. 11-C SE NW SE 13-27-5; No. 12-C, SW NW SE, 13-27-5; No. 13, NW SE 13-27-5; No. 14, C NE NW SE 13-27-5; No. 15 C NW NE SE 13-27-5; No. 16, NE SE 13-27-5; Delmar-Midland No. 1, SE NW 14-27-5; No. 2 C SW SE NW 14-27-5; No. 3 C SE SW NW 14-27-5; No. 4 SW NW 14-27-5; No. 5 C NW SW NW 14-27-5; No. 6 C NE SW NW 14-27-5; No. 7 C NW SE NW 14-27-5; No. 8 C NE SE NW 14-27-5; No. 9 C SE NE NW 14-27-5; No. 11 C SE NW NW 14-27-5; No. 12 C SE NW NW 14-27-5; No. 13 NWc 14-27-5; No. 14 C NW NW NW 14-27-5; No. 15 C NW NE NW 14-27-5; No. 16 NE NW 14-27-5. Cosden Oil & Gas Co.'s No. 1 SE SW 14-27-5; No. 2 C SW SE SW 14-27-5; No. 3 C SE SW SW 14-27-5; No. 4 SWc 14-27-5; No. 5 C NW SW SW 14-27-5; No. 6 C SW NW SW 14-27-5; No. 7 NW SW 14-27-5; No. 8 C NE NW SW 14-27-5; No. 9 C NW NE SW 14-27-5; No. 10 NE SW 14-27-5; No. 11 C SE NE SW 14-27-5; No. 12 C NE SE SW 14-27-5; No. 13 C NW SE SW 14-27-5; No. 14 C NE SW SW 14-27-5; No. 15 C SE NW SW 14-27-5; No. 16 C NW NW SW 14-27-5; No. 1 SEc 14-27-5; No. 12 C SW SE SE 14-27-5; No. 3 C SE SW SE 14-27-5; No. 4 SW SE 14-27-5; No. 5 C NW SW SE 14-27-5; No. 7 NW SE 14-27-5; No. 8 C NE SW SE 14-27-5; No. 10 NE SE 14-27-5; No. 9 C NW NE SE 14-27-5; No. 11 C SE NW SE 14-27-5; No. 12 C NE SE SE 14-27-5; No. 13 C NW SE SE 14-27-5; No. 14 C NE SW SE 14-27-5; No. 15 C SE NW SE 14-27-5; No. 16 C SW NW SE 14-27-5. Kewanee Oil & Gas Co.'s No. 1, SW SE 18-27-6; No. 2 C NW SW SE 18-27-6; No. 3 C SW NW SE 18-27-6; No. 4 NW SE 18-27-6; No. 5 C SE SW SE 18-27-6; No. 6 C SW SE SE 18-27-6; No. 7 NE SE 18-27-6; No. 8, C NW NE SE 18-27-6; No. 9 C NE NW SE 18-27-6; No. 10 C NE SW SE 18-27-6; No. 11 C NW SE SE 18-27-6; No. 12 C SE SE SE 18-27-6; No. 13 C SE NW SE 18-27-6; No. 14 C SW NE SE 18-27-6; No. 15 C SE NE SE 18-27-6; No. 16 C NE SE SE 18-27-6.

TEXAS

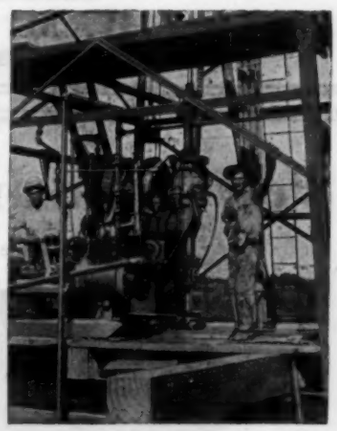
Archer County—Kentucky Oil Corp.'s L. F. Wilson 4-F, Amer. Trib sur, blk 27, 300 ft S No. 5; F-5, 270 ft to N and 150 ft to W lines; F-6, 270 ft to N and 150 ft to E line; F-7, 300 ft S No. 6; F-8, 50 ft E No. 4; F-9, 50 ft N No. 1; F-10, 50 ft N No. 2; F-11, 50 ft N No. 3; F-12, 50 ft N No. 8; C-5, 50 ft N No. 1; C-6, 50 ft W No. 2; C-7, 50 ft S No. 3; C-8, 50 ft E No. 4; E-11, 150 ft to N and W lines; E-12, 50 ft S No. 11; E-13, 50 ft S No. 10; E-14, 50 ft N No. 9; E-15, 50 ft W No. 8; E-16, 50 ft S No. 1. W. S. Langford's Kemp & Kempner 7, W. V. F. L. sur, blk 42, 65 ft E. No. 4. Ramming & Saunders' L. F. Wilson 2, Amer Trib sur, blk 23, 340 ft W No. 1. Shamrock Oil Co.'s N. Goldsmith 1, J. L. Anderson sur, blk 6, 810 ft to N and 150 ft to W line; Mrs. R. E. Harbison 5, blk 4, 345 ft W No. 4. Murchison & Fain's L. F. Wilson 5, Amer Trib sur, blk 29, 340 ft S No. 4; 6, 340 ft S No. 3; 7, 150 ft to S and W lines. W. T. Willis' J. L. Jackson 3, D. C. S. L. 3 sur, 300 ft E No. 1. D. S. Donovan's J. H. White 1, Amer Trib sur, sec 34, 150 ft to N and W lines. Staley & Wynne's Kemp F-3, W. V. F. L. sur, blk 77, 500 ft NW No. 2; 4, 450 ft to W and 150 ft to S line. Lewis H. Phillips' Hackman & Sanderson 2, D. C. S. L. 3 sur, blk 23, 300 ft S No. 1. Barkley & Meadows' W. D. McClure 1, GC&SF Ry. sur, sec 6, 768 ft to N and 150 ft to W line. Jones Oil Co.'s L. F. Wilson 5, Amer Trib sur, blk 29, 150 ft to N and E lines. Evangeline Pet. Co.'s G. F. Boone 1, S. Singleton sur, sec 14, 5000 ft to W and 3920 ft to S line. Dudley S. Golding's W. L. Kunkel 1, BBB&C Ry sur, sec 3, 150 ft to N and W lines. Gulf Prod. Co.'s Kell-Kempner 1, W. V. F. L. Ry sur, blk 8, 150 ft to N and W lines. P. F. Gwynn's L. F. Wilson 7, Amer Trib sur, blk 27, 300 ft N No. 4. Empire Gas & Fuel Co.'s L. F. Wilson C-5, Amer Trib sur, 40 ft W No. 4; C-6, 340 ft S No. 4; C-7, 340 ft S No. 6; C-8, 340 ft S No. 5. Camp Oil & Gas Co.'s L. F. Wilson 12, Amer Trib sur, C 24, 150 ft to E and 450 ft to S line; 13, 310 ft N No. 8. G. C. Wood et al's L. F. Wilson 5, Amer Trib sur, blk 27, 180 ft W No. 1. Maer Staniforth's L. F. Wilson 11, Amer Trib sur, blk 27, 270

Sullivan Diamond Drills Date from 1875

We've been building Diamond Core Drills for 49 years. Don't know everything about core drilling yet, but we're learning.

Back in 1900 we were making over 20 models of Diamond Drills, and had more than 300 at work in South Africa alone, some at depths of over a mile.

Sullivan Diamond Drills have been used in every country in the world where mining is carried on. They have located millions of dollars' worth of coal and hard mineral deposits, and have saved millions more by reporting the absence of values.



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ft N No. 7. Texhoma Oil & Ref. Co.'s W. H. Taylor A-1, Amer Trib sur, 150 ft to N and W lines. Sixty-Six Oil Co.'s L. F. Wilson D-1, Amer Trib sur, blk 23, SE cor; D-2, 300 ft W No. 1. Scott, Barton & Gose's Parish Bros. 5, S. P. Ry sur, sec 2, 400 ft S No. 2.

Angelina County—Paggi Bros. Oil Co. et al's Cameron Lbr. Co. 2, I. Wray sur, 300 ft N No. 1.

Atascosa County—Kurtz Oil Co.'s Lee Hager 1, W. C. Baker sur, 150 ft to S and E lines.

Bexar County—National Oil Corp.'s A. Cohan est. 4, No. 4 sur, 500 ft N No. 2. Gas Ridge Dev. Co.'s Oliver 6, M. F. Rodriguez sur, 900 ft E No. 5.

Brown County—J. L. McMurray's J. W. Newton 1, Wm. Miller sur, sec 149, 155 ft to N and W lines. Watson & McCarthy's E. de Busk, N. B. Mitchell sur, sec 647, 150 ft to N and E lines.

Brazoria County—Texas Co.'s So. Tex Dev. Co. 2, H. Austin No. 6 sur, 700 ft to N and 300 ft to E line.

Caldwell County—Armstrong, Lefevre & Storey's F. E. Perry 1, P. Martinez sur, 700 ft to N and 150 ft to W line. Jarmon Oil Co.'s M. Moore 1, Jno. Henry sur, 300 ft NW No. 2; 4, West Central.

Clay County—Kimbrough & Montgomery's J. B. L. Hansard 1, Specht & McCutcheon sur, blk 48, 150 ft to N and W lines. Lone Star Gas Co.'s N. H. Martin 19, B. C. S. L. sur, blk 65, 750 ft to N and 250 ft to W line.

Callahan County—Ratblatt & Polsky's J. S. Hart 1, Insane Asy sur, sec 58, 150 ft to S and W lines. Schackelford Oil Co.'s M. A. Thomason 4, TE&L Ry. No. 2270 sur, 300 ft E No. 1. Smith & Buffington's McKinney Bros. 1, TE&L Ry. No. 3167 sur, 150 ft to E line. Welch, Hagerty et al's J. F. Gunn 1, TE&L Ry. No. 2292 sur, 450 ft to W and 150 ft to S line. Knightly, Greathouse & Couvehouse's C. Grisham 1, TE&L Ry. No. 2300 sur, 150 ft to S and W lines. Fred B. Foster & Co.'s S. M. Eubanks 1, TE&L Ry. No. 3163 sur, 900 ft to W and 150 ft to S line. A. J. Breman's W. E. Pruet 14, TE&L Ry. No. 2278 sur, 325 ft SW No. 12.

Eastland County — Magnolia Pet. Co.'s Wright & Eison 3, T. Tyler sur, 150 ft to N and E lines.

Guadalupe County—Texas Co.'s J. E. Allen 1, H. Cottle sur, 150 ft to S and W lines; 2, 300 ft E No. 1. J. Dancinger's J. M. Pearman 1, R. Hall sur. United North & South Oil Co.'s L. Marines 4, H. Cottle sur, 600 ft W No. 3; 5, 170 ft to N and 167 ft to E line; 10, 150 ft to W and 155 ft to S line; 11, 331 ft S No. 10; 12, 900 ft E No. 11; 13, 600 ft E No. 12; 14, 600 ft E No. 13, 15, 150 ft to W and 155 ft to N lines; J. E. Allen 6, 330 ft E No. 5; 7, 150 ft to S and W lines.

Harris County—Martin Pet. Co.'s Higgins & Masterson's 5, Jas. Strange sur, 400 ft to E and 600 ft to N line. Gulf Prod. Co.'s H. Busch 16, Wm. Scott sur, 20 ft W No. 1. Texas Co.'s CO&G 28, J. B. Stevenson sur, 400 ft W No. 27; Koehler 34, 610 ft to S and 200 ft to E line.

Hardin County—Acorn Oil Co.'s Parrafine 46, Green sur, 100 ft to NE cor. Lake View Oil Co.'s Minor Oil Co. 4, S. Jackson sur, 100 ft to W and 275 ft to S line.

Liberty County—F. L. Thomson's T. Ray 3, E. Taylor sur, 150 ft S No. 1.

Live Oak County—W. T. Herrick's B. Jacob 1, GH&H Ry. sur, 1040 ft to S line and 1860 ft to W line.

McMullen County—Southern Nat. Gas Co.'s H. L. Lark 7, E. W. B. Scrugham sur, 2000 ft N No. 5; 6, SW cor Geo. B. Picett's L. Jacob Est. 3, GH&H Ry. sur, NW cor.

Navarro County—Witherspoon Oil Co.'s G. Springfield 1, W. P. Lane sur, 150 ft to S and W line. Seay, Cranfill & Reynolds' Harvard 4, J. D. Mathews sur, 50 ft NW No. 2; 5, 50 ft NW No. 1. Jno. Hooser's Hill B-3, Jas. Smith sur, 300 ft N No. 1. Roberts Bros.' J. Hill 1, Jas. Smith sur, 150 ft to N and E lines. Tidal Oil Co.'s S. D. Ramsey A-12, Jas. Smith sur, 150 ft W No. 4. Shouwers, Peacock, Smith & Vaughn's J. L. Hill 1, Jas. Smith sur, 237 ft E No. A-1. Shouwers & Peacock's D. Donoho 1, P. Highnote sur, NE cor. Mills Bennett's K. Wolens 4, Smith & Green sur, 150 ft to E and 750 ft S line. Elliott, Sparkman & Mauldin's Hill 4, Jas. Smith sur, 300 ft W No. 3.

Orange County—Gulf Prod. Co.'s Lee Hager 4, S. M. Luce sur, South Central; 6, 250 ft E No. 4.

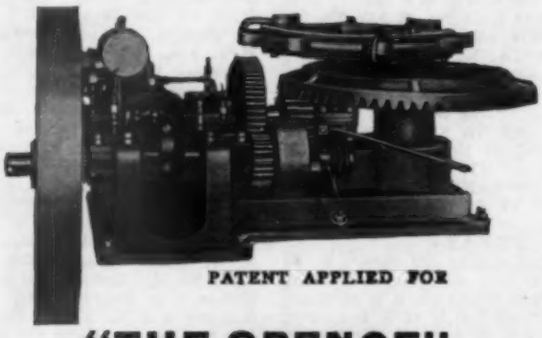
Palo Pinto County—Texas Pacific Coal & Oil Co.'s J. H. Robinson 8, T&P Ry. sur, 2890 ft to S and 2450 ft to W line.

Reagan County—Big Lake Oil Co.'s State Univ. 8, Univ Lands sur, sec 2, 409 ft to S and 906 ft to W line; 9, 400 ft to E and 79 ft to S line.

Shackelford County—Clarence Houseman's R. A. Elliott 2, Univ. Lands sur, sec 81, 450 ft to N and 150 ft to W lines.

Stephens County—Scott, York & Bateman's G. R. Davis 1, TE&L Ry. No. 3386 sur, 330 ft to N and W lines. Texas Pacific Coal & Oil Co.'s W. J. Gardenshire A-4, T&P Ry. sur, sec 43, 1650 ft to N and 260 ft to E lines. Gulf Prod. Co.'s Whalen-Wilson 1, TE&L Ry. No. 3393 sur, SE cor.

Wichita County—Humble Oil & Ref. Co.'s T. L. Burnett E-1, T&NO Ry sur, sec 1, 685 ft to W and 661 ft to S line; L. P. Douglas 14, HT&B Ry. sur, sec 11, 345 ft N No. 6. W. H. Engel's Kemp & Kempner 5, W. V. F. L. sur, blk 57, 480 ft E No. 1. Bradley Oil Co.'s J. Hirschi 24, D. Cowan sur, 300 ft E No. 23. E. S. Carey's W. J. Sides 1, C. Winters sur, 150 ft to S and W lines. Panhandle Ref. Co.'s S. H. McCarty Est. 2, S. O. Fowler sur, 300 ft N No. 1. Gulf Prod. Co.'s T. W. Roberts A-1, H&GN Ry. sur, sec 20, 150 to S and E lines. Apple & Brandeberry Oil Co.'s Mrs. G. Jennings 2, HT&B Ry. sur, sec 12, 50 ft E No. 1. Camp Oil & Gas Co.'s L. P. Douglas 8, HT&B Ry. sur, sec 12, 50 ft S No. 7. McClure & Browning's Mrs. G. Jennings 2, HT&B Ry. sur, sec 12, 450 ft to W and 150 ft to N lines. Perkins & Cullum's S. B. Burnett et al 5, SA&MG Ry. sur, sec 2, 300 ft S No. 3. Electra Gulf Oil Co.'s Kemp & Kempner 1, W. V. F. L. sur, blk 62, 150 ft to S and W lines.



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Rubsam & Hunter's W. D. McClure 2, GC& SF Ry. sur, sec 6, 768 ft to N and 150 ft to W line. Magnolia Pet. Co.'s Rio Bravo 34, H&TC Ry. sur, sec 31, 50 ft W No. 10. F. G. Ford's D. E. Holt 1, T. C. S. L. Ry, sur, sec 25, 200 ft to W and 500 ft to N line. I. P. Hammond's B. F. Dutton 1, D. C. S. L. sur, blk 18, 150 ft to N and W lines. Jas. White et al's J. E. Roller Est. 1, S. Holloway sur, 450 ft to S and 150 ft to E line.

Webb County—C. G. Chandler's Ochoa 3, Ochoa Pasture sur, blk 59, 150 ft to E and 240 ft to S line. Howard & Ryan's A. M. Bruni 1, A. de Arriba sur, SE cor. Boyd Oil Co.'s Petty 1, Petty Ranch sur, sec 18, 5300 ft to E and 3400 ft to S line.

ARKANSAS

Ouachita County—Atlantic Oil Prod. Co.'s Breiton A-1, 25-15-17, 225 ft S and W of W½ SE¼ NW¼; Breiton A-2, 25-15-17, 225 ft S and W of NEc SW¼ NW¼; Breiton A-3, 25-15-17, 225 ft S and E of NWc SW¼ NW¼; Breiton A-4, 25-15-17, 225 ft N and E of SWc SW¼ NW¼. Gilbertson et al's Berry 7, 24-15-17, 200 ft N and E of SWc SE¼. Gulf Refining Co.'s Hardin 4, 28-15-16, 200 ft S and W of NEc of Sec, to deepen old well; Meekin 5, 29-15-16, 200 ft S and 1120 ft W NEc of Sec; Solmson 6, 29-15-16, 300 ft N and W of SEc SW¼. E. S. Kelley et al's Smith 1, 34-15-17, 175 ft N and E of SWc of Sec. Korey et al's Wells 1, 24-15-17, 200 ft N and E of SWc W½ SE¼ NW¼. Magnolia Pet. Co.'s Smith B-6, 31-15-16, 250 ft S and E of NWc SW¼ SW¼. W. J. Mangus et al's Fee 3, 24-15-17, 440 ft S and 200 ft E of NWc NE¼ SE¼. Mangus Oil Co.'s Mangus 5, 24-15-17, 200 ft S and E of NWc S½ NE¼ SE¼. Marr Oil Corp.'s T. C. Patton 1, 32-15-16, 330 ft N and E of SWc NE¼ NE¼ SW¼; Mullins 4, 28-15-16, 200 ft N and 150 ft W of SEc SE¼ NE¼. Nelson et al's Anderson 1, 26-15-17, 200 ft S and W of NEc W½ SW¼ NE¼. Skelly Oil Co.'s Chandler 1, 19-15-16, 300 ft N and 150 ft W of SEc of Sec. Standard Oil Co.'s Minor 3, 21-15-16, 300 ft S and E of NWc SE¼ SW¼. Sure Oil Corp.'s Fee 5, 30-15-16, 660 ft S and E of NWc NE¼ SW¼. The Texas Co.'s Smith 3, 31-15-16, 200 ft S and E of NWc SE¼ SW¼; Snow 1, 30-15-16, 217 ft S and 172 ft E of NWc of Sec. Wingfield et al's Fincher 3, 29-15-16, 900 ft S and 1060 ft E of NWc NW¼ SE¼. Morgan-Pride Synd.'s Green 1, 22-15-19, 300 ft N and W of SEc NE¼ SE¼.

Union County—Anderson et al's Cook 1, 17-16-15, 200 ft S and E of NWc SE¼ SE¼. Braswell et al's Moore 1, 19-16-15, 200 ft S and W of NEc N½ NW¼ NW¼. Cook et al's Jones 1, 21-16-15, center of blk 14. Dail et al's LeCroy 1, 17-16-15, 100 ft N and W of SEc NE¼ NE¼, 2 acre tract. Edmondson et al's Umstead 1, 2-16-16, 450 ft S and 190 ft E of NWc Lot 4. Estes et al's Freeman 2, 1-16-17, 200 ft N and W of SEc NW¼. Federal Pet. Co.'s Stock 1, 20-16-15, 200 ft N and W of SEc SE¼ NE¼; Stock 2, 20-16-15, 200 ft N and W of SEc N½ NE¼ SE¼. Gulf Ref. Co.'s Flenniken 2, 5-16-15, 3760 ft N and 1120 ft E of SWc of Sec. Hickman et al's Hayes 2, 21-16-15, 200 ft S and 150 ft E of NWc NW¼ SW¼. La-Tex Drilling Co.'s Hayes 1, 21-16-15, 800 ft S and 230 ft W of NEc SW¼ NW¼. Leonard et al's Pendleton 1, 21-18-15, 200 ft N and 480 ft E of SWc NE¼ SW¼. Lyall et al's Fee 2, 3-16-15, 200 ft S and W of NEc S½ SE¼ NW¼. Mazda Oil Co.'s Lawton 1, 10-16-15, 165 ft N and E of SWc NW¼ SW¼ SW¼. Phillips Pet. Co.'s Giller 6, 11-16-15, 200 ft S and W of NEc SW¼ SW¼. Pure Oil Co.'s Hayes 3, 21-16-15, 575 ft N and 103 ft E of SWc SE¼ NW¼. Sandford et al's Murphy 2, 8-16-15, 200 ft N and E of SWc SE¼ SE¼. Speary & Johnson's Black 1, 21-16-15, 575 ft N and 1000 ft W of NWc NE¼ SW¼. Stacey et al's Lawton 1, 9-16-15, 150 ft S and E of NWc W½ NW¼ NE¼ SW¼. Standard Oil Co.'s Lingelbach 6, 22-16-15, 300 ft N and W of SEc NE¼ NE¼. Stewart et al's Goodwin 2, 21-16-15, SWc Lot 3, Block 19. The Texas Co.'s Alphin 4, 3-16-15, center of west line NE¼ SE¼; Graves 5, 3-16-15, center north line SW¼ SE¼.

LOUISIANA

Acadia Parish—Fontenot Oil Co.'s Fee 5, 45-9s-2w, 290 ft N and 475 ft W of SE cor of sec.

Bossier Parish—W. W. Armistead's Bernstein 1, 11-20n-13w, 100 ft N and 100 ft E of SW cor of sec. Gulf Ref. Co.'s Bliss et al 12, 10-19n-11w, 2310 ft W and 1220 ft N of SE cor of sec. Gulf Ref. Co.'s Bliss et al 13, 10-19n-11w, 2245 ft W and 133 ft N of SE cor of sec. Humble Oil & Ref. Co.'s Bliss & Wetherbee A-12, 10-19n-11w, 990 ft N and 1980 ft E of SW cor of sec. Standard Oil Co.'s E. D. McLoud 1, 13-19n-11w, 330 ft S and 330 ft E of NW cor NE¼. Geo. W. Wetherbee's Fee B-6, 15-19n-11w, 1177 ft S and 150 ft E of NW cor NW¼ of SW¼.

Evangeline Parish—Pine Prairie Dev. Co.'s LeDonois 2, 35-3s-1w, 300 ft N and 300 ft E of center of sec.

Claiborne Parish—Standard Oil Co.'s T. H. Lloyd 1, 10-20n-5w, 1982 ft N and 2624 ft E of SW cor of sec.

Morehouse Parish—Humphreys Carbon Co.'s Stevenson 1, 16-22n-5e, 300 ft E and 300 ft S of NW cor of SW¼. Carson Carbon Co.'s Erwin 2, 28-20n-5e, 2790 ft N and 1620 ft W of SE cor of sec. Oil Fields Exploration Co.'s R. Watson 1, 13-20n-4e, 660 ft N and 660 ft W of SE cor of sec. Oil Fields Exploration Co.'s E. W. Watson 1, 13-20n-4e, 1980 ft W and 820 ft N of SE cor of sec. Oil Fields Exploration Co.'s Collins 1, 18-19n-5e, 1980 ft W and 660 ft N of SE cor of sec.

Ouachita Parish—Oil Fields Exploration Co.'s Cordell-Todd 1, 32-20n-5e, 2340 ft E and 2340 ft S of NW cor of sec. Oil Fields Exploration Co.'s Watson-Schraeder 1, 32-20n-5e, 1620 ft E and 1551 ft S of NW cor of sec. La Del Oil Prop.'s Fee 24, 6-19n-5e, 300 ft N and 300 ft W of center of sec. Southern Carbon Co.'s Fee 31, 21-19n-5e, 1020 ft E and 1020 ft S of NW cor of SW¼.

Union Parish—Neddo Pet. Investment Co.'s Ida Smith 2, 2-23n-3w, 150 ft W and 100 ft S of NE cor. SE¼.

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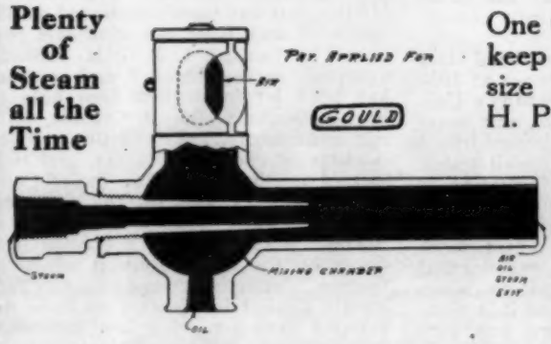

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WILDCATS FROM ALL SECTIONS

Two Completions Due With Next Two Weeks In Vicinity of Production in Reagan County

Fort Worth, Texas, March 31.—Two more completions are expected within the next two weeks in the vicinity of the wildcat oil producers in Reagan County section of West Texas, while nine other tests have been started, or are rigging up in the county. The two tests nearing completion have passed the 2600 foot level, and will have an important bearing on the future trend of developments around the discovery well, as one is about one mile to the southwest from the discovery well, while the other is slightly more than a mile in the northeast direction from production. Since the completion of two small pumping wells last January to the west and northwest of the discovery well, leasing activity has centered in a northeast to southwest and east direction from the proven area, with a number of large drilling blocks being sold carrying drilling obligations.

The discovery well of the Reagan County oil producing area continues to pump from 190 to 200 barrels of 38.6 gravity oil and a small quantity of water from sandy lime pay at 3026 feet and is not showing a decline in production, although 10 months have elapsed since it was drilled in. This well is owned by the Big Lake Oil Company and is located on University of Texas land, being slightly south of the center of the northeast quarter of section 2, block 2. The Big Lake Oil Company's University 4, located in the northeast corner of the northwest quarter of section 35, block 1, is drilling below 2660 feet, while the same company's University 5, located in the southwest corner of the southeast quarter of section 13, block 2, is reported to be drilling below 2600 feet. Both of these drilling tests are reported to be logging the formations identical with the discovery well, and at the same depths, taking elevations into consideration.

After having been completed last January as a 30 barrel pumper at 3054 feet, the Big Lake Oil Company's University 2, located 800 feet due west of the discovery well, is being drilled deeper. The oil from this well tested 42 gravity, and the pay formation is reported to be of a different color than that found in the discovery well. Reports from the field late last week credit this test as having encountered a richer oil bearing formation when drilled a few feet deeper, and it is planned to make thorough deep test with this hole, unless the oil production is materially increased. The Big Lake Oil Company's University 3, located 800 feet north of No. 2, is pumping about 40 barrels of 39 gravity oil and a small quantity of water with a total depth of 3042 feet. The production of this well and that of the discovery well is being sold for fuel in the field.

The first attempt to introduce rotary equipment in Reagan County has met with favorable success in negotiating the hardest formation encountered in drilling. This type of drilling equipment is being used by the Big Lake Oil Company's University 10 and the hole was below 1300 feet late last week, after having spudded during the second week in March and shut down on several occasions for fuel and water. The first 800 feet of drilling in this section of Reagan County is mostly hard lime, and from this level on down to the producing horizon the formations offer little resistance to rotary bits.

Central West Texas Wildcats

BROWN COUNTY — M. T. Anderson's Wheeler 1, rig. Brownwood Prod. & Ref. Co.'s Williams 8, rigged up. Canyon Oil & Gas Co.'s B. W. McDonough 2, dr 1085 ft. Joe Cullinan et al's G. W. Pickett 1, sd 1135 ft. Carlton-Tippett's O. B. Fomby 1, sd 1315 ft. Hart et al's Moore 1, dr 1050 ft. Infield Pet. Co.'s T. M. Windham 5, rig. Leonard Pet. Co.'s Prather 2, sd 2370 ft. McMurry et al's Newton 1, rigging up. Maher Bros.' Bohara 1, sd 2155 ft. Omaha Southern Oil Co.'s G. B. Gaines 2, sd 1690 ft.

CALLAHAN COUNTY—Burleson Oil Co.'s Isenhower 2, swabbing 15 bbls oil, td 1770 ft. Byron-Union Oil Co.'s Hennessey 1, sd 4045 ft. Chas. Dutton et al's Mrs. L. Cathey 3, swabbing 30 bbls oil, sd for shot 1760-79 ft; Harwell 1, rigging up. Dudley Oil & Gas Co.'s Hugh Moore 1, sd 1750 ft. Hickey et al's E. L. Findley 2, dr 2720 ft. Junior Oil Co.'s Surles 1, timbers. C. O. Moore et al's H. P. Faulkner 2, sd 2505 ft; Anderson 1, dr 590 ft. Pennant Oil & Gas Co. et al's W. B. Bryson 2, dr 2280 ft; Webb-Albin 5, timbers. Root & Rhoades' Mrs. L. Cathey 1, sd for repairs 1200 ft. Seaboard Oil & Gas Co.'s Isenhower 1, dr 575 ft. Schaffner et al's James 2, ur 1950 ft. Shackelford et al's Chas. Allen 1, sd 1675 ft. John Sherrin's Mrs. L. Cathey 1, setting 5 3/16 cas with hole full water 1640 ft. Sherrin et al's L. Cathey 2, lcn. Tidal Oil Co.'s Mrs. Ella Cathey 1, timbers. Andy Urban's Clinton 1, sd 1970 ft.

COLEMAN COUNTY—W. A. Gray et al's Gray 1, sd 2485 ft. Patterson Oil Co.'s Fricks 1, sd 1005 ft. J. A. Robertson's Robertson 18, dr 1645 ft. Roth & Farroth's Overall 6, rigging up. Sunflower Pet. Co.'s Cates 3, dr 1065 ft. Tidal Oil Co.'s W. G. Gates 1 and 2, lcns.

HOOD COUNTY—Corsicana Oil & Ref. Co.'s I. A. Rylee 1, dr hard sand 3475 ft.

PALO PINTO COUNTY—Jack Dalton Oil Co.'s R. S. Dalton 5, dr 900 ft. Fultz & Albright's McGee 1, dr 1300 ft. E. Hess et al's Crocker 1, plugging back to 3400 ft, td 3708 ft. Harris et al's Weldon 1, dr 3690 ft. Haubert et al's Porter 1, sd 305 ft. Lowe & Murray's Chenault 1, showing gas dr 515 ft. Moore & Sneboldt's Pruitt 1, dr 3360 ft; Boles 2, sd 2035 ft. S. W. Manning et al's R. Hitson 1, sd 3640 ft. Pender Prod. Co.'s L. C. Slemmons 1, sd 4135 ft. Phillips & Graham's J. A. Caudill

Will Drill 3500 Foot Test in Gray County; Texas' Carson County Well Drops to 900 Bbls.

Amarillo, Texas March 31.—A combination rig is to be used by the Wilcox Oil and Gas Company in drilling a wildcat test on the Worley & Reynolds ranch in Gray County section of the Panhandle district. The location for this test has been announced as 330 feet each way from the southeast corner of section 62, I. & G. N. Railway Company survey, block 3, and contract has been let for a 3500 foot hole to Farish, Watts, Collins & Crosbie, drilling contractors. The drilling block consists of about 4500 acres, and it is located northwest of The Texas Company's big gas well on the Saunders ranch.

The Texas Company's big oil producer on the S. B. Burnett ranch in Carson County section of the Panhandle district is reported to have developed caving trouble late last week and resumed swabbing at intervals to maintain steady production, after having kept above the 1000 barrel mark in daily production in the fore part of the week. A gauge taken late last week showed the production down to 445 barrels daily, but the well has since increased to 900 barrels. The oil produced by this well is being stored in a 55,000 barrel tank on a nearby lease.

The drilling crew in charge of the rotary test on W. W. Silk and others' S. B. Burnett 3, section 115, Carson County, are not meeting with success in recovering a lost drill stem after twisting off same several weeks ago while drilling in lime at 2905 feet. Except for a few minor fishing jobs, this rotary equipment made good time in negotiating the formations, and had almost passed out of the hard lime when the accident occurred.

Skelly Oil Company's deep wildcat test on the Davis Brothers ranch in Wheeler County section of the Panhandle district, and west of the Sayre oil producing area, has been abandoned as a dry hole after drilling to a total depth of 4440 feet without showing oil. This test is located near the south line of section 24, H. & G. N. R. R. Co. survey, block A-7, and is one of the deepest tests ever drilled in the county. Woodley and associates have moved in a star machine to drill for shallow gas on the D. L. Bowers land, near the town of Shamrock, and have made location about 2180 feet south and 200 feet west of the northeast corner of section 45, H. & G. N. Railway Company survey, block 17.

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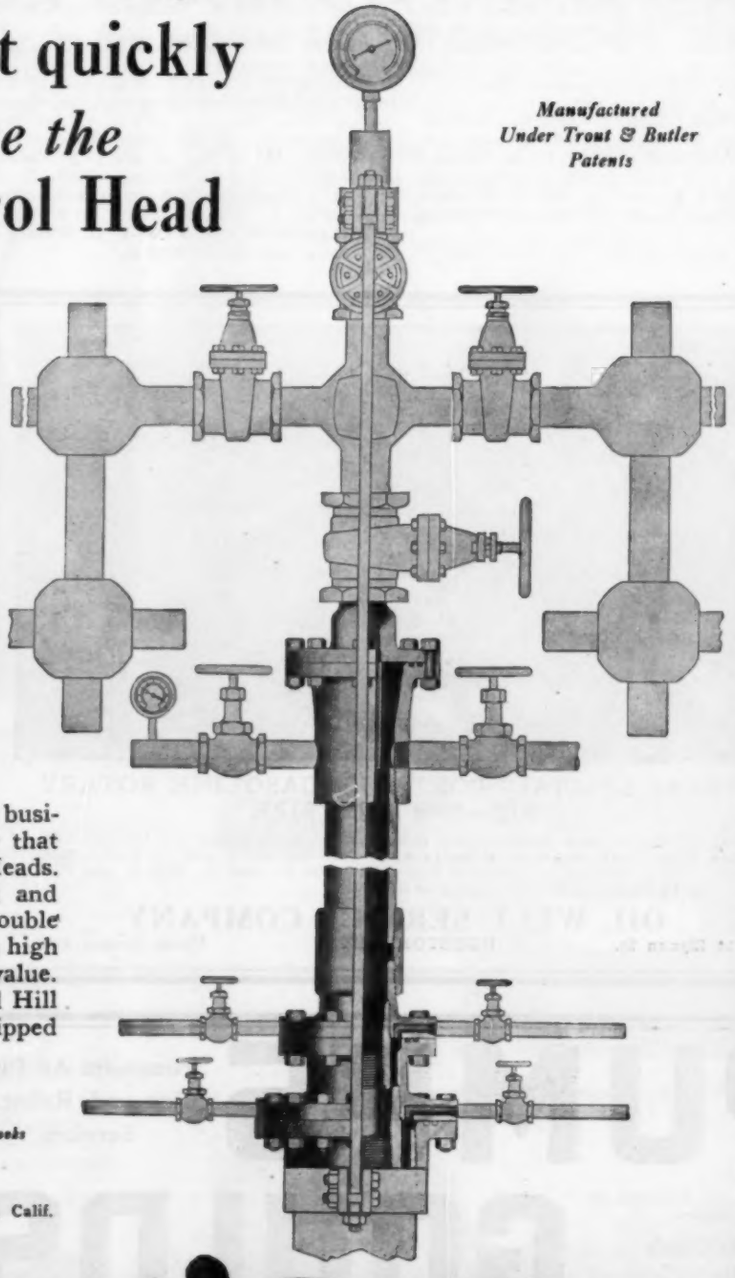
if you use the
Regan Control Head

Manufactured Under Trout & Butler Patents

You can prevent a blowout such as this with the Regan and place the most powerful gusher under the cap in shortest time.



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Manufacturers of Oil Well Equipment

San Pedro, *California* U·S·A.

1, ur cas 3080 ft. Scott & McCluer's River Bed 1, sd 3712 ft. H. L. Singleton et al's W. Holt 1, dr 4230 ft. Skelly Oil Co.'s Carter 1, sd 2710 ft. Texas Pacific Coal & Oil Co.'s J. N. Stewart 145, fsh tools 1608 ft; Stewart 146, lcn; J. H. Robinson 8, dr 580 ft. Upham Gas Co.'s P. T. Dalton 1, dr 950 ft; Dalton Estate 1-B, dr 1315 ft. R. A. Wheeler's Fee 1, dr 2400 ft. Youkan Oil & Gas Co.'s Seaman 1, sd 3965 ft.

BORDEN COUNTY—Kesselman Dev. Co.'s A. J. Long 1, rigged up and sd.

BREWSTER COUNTY—Arco Dev. Co.'s H. L. Kokernot 1, fsh cas 3765 ft. Brewster Oils Co.'s H. L. Kokernot 1, sd 2535 ft. Portland Oil Synd.'s State 1, sd 3040 ft. Nine Points Oil Co.'s Peralto & Finnell 1, sd 1570 ft. Marathon Oil Co.'s Nigger Creek 1, sd 2350 ft; Wilson 2, sd 4000 ft.

COKE COUNTY—Ace Oil Co.'s W. C. Locke 1, spudded and sd. Adkins Oil Co.'s J. R. Smith 1, lcn. Mexia-Equitable Oil Co.'s W. J. H. Hodges 1, sd 2505 ft.

CONCHO COUNTY—Dome Prod. Co.'s Mrs. C. M. Hartgrove 1, dr 410 ft. Signal Oil Co.'s Sam Waring 1, pull casing to shoot pay at 2560 ft, td 3203 ft. Schultz Oil Co.'s W. O. Schultz 1, sd 3225 ft.

CRANE COUNTY—Texas Dev. Co.'s Jack Cowden 1, timbers.

CROCKETT COUNTY — Crockett Drilling Synd.'s J. M. Shannon 1, dr 2645 ft; Shannon 2, lcn; Robt. Massey 1, sd 535 ft. Bill Redman et al (was Enders-Smith) University 1, sd 810 ft. W. E. Ball et al's J. S. Todd 1, lcn. Marathon Fold Drilling Club's L. P. Powell 1, dr 350 ft. Mid-Kansas & Transcontinental Oil Co.'s Harris Bros. 1, dr 1705 ft.

CULBERSON COUNTY—J. D. Wesner et al's Mack Sayles 1, sd 3105 ft.

"TEXAS SPECIAL" PORTABLE GASOLINE ROTARY RIG—2500 FOOT SIZE

15 H. P. Engine—4x6 Gardner pump bolted liners. Cone Clutch and COMPLETE Draw Works. All on wheels 10 inches wide. You can drill a well for $1.00 a foot. How's that for economy? Made in four sizes—1000 ft., 1400 ft., 1800 ft. and 2500 ft. Everybody is using them. Get yours NOW.

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Pumps for All Pipe Line and Refinery Services

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SENECA FALLS, N. Y.

Crude Oil Emulsions Successfully Treated

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Electrical Dehydration Process

Analysis, Tests, and Estimates Furnished

PETROLEUM RECTIFYING COMPANY OF CALIFORNIA

308 UNION OIL BLDG.

LOS ANGELES, CALIFORNIA

DAWSON COUNTY—Lamesa Oil Co.'s John Burns 1, sd 2155 ft.

ECTOR COUNTY—Farmers Oil & Gas Co.'s Andy Newham 2, sd 1400 ft.

EL PASO COUNTY—Burns & Knight's Fee 1, sd 4170 ft.

FISHER COUNTY—Pyron Oil Co.'s J. A. McCall 1, sd 3125 ft.

GLASSCOCK COUNTY—Cushing Ranch Drilling Assn.'s W. H. Sparkman 1, sd 1950 ft. General Oil Co.'s L. S. McDowell 4, sd 3685 ft. Associated Ref. & Prod. Co.'s C. I. Brunson 1, sd 2935 ft.

HUDSPETH COUNTY—Wm. Loftus et al's Minnie Veal Slaughter 1, dr 1805 ft. Boole Oil Assn.'s Gardner et al 1, sd 1540 ft. Hueco Basin Oil Co.'s University 1, sd 2560 ft.

HOWARD COUNTY—Big Springs Prod. Co.'s Mable O. Quinn 1, sd 3640 ft.

KINNEY COUNTY—Havaline Oil Co.'s Weathersbee Ranch 1, fsh 3760 ft.

JONES COUNTY—Anson Oil & Dev. Co.'s C. B. Brown 1, sd 1855 ft. C-H Oil Development Co.'s J. A. Cullom 1, sd 3115 ft.

LOVING COUNTY—Ramsey Prod. Co.'s Russell 1, fsh cas 4485 ft; Russell 2, sd 810 ft.

MITCHELL COUNTY—California Co.'s W. H. Abrams (T&P) 5, dr 2935 ft; W. H. Butler 1, dr 2160 ft; A. L. Miller 2, co after shot 200 quarts from 2940 to 3005 ft, td 3090 ft; E. Morrison 1-A, dr 4480 ft; Morrison 2-A, estimated 110 bbls running tubing after shot 3030 ft; Earl Morrison 5, co after shot 340 quarts 2970-3080 ft, td 3085 ft; L. C. Lesure 2, dr 2960 ft. S. A. Sloan Oil Co.'s Sam Smart 3, dr 1170 ft; Smart 4, dr 450 ft; Smart 5, rigging up. J. F. Carey et al's Earl Morrison 1, fsh bailer after shot 200 quarts from 2985 to 3105 ft, td 3120 ft. Chal Daniel et al's W. D. Kynard 1, rigging up. M. E. Eddleman's A. C. Gist 1, bldg rig. Tidal Oil Co.'s Handley 1, lcn. Colorado-Texas Pet. Co.'s W. L. Foster 2, sd 2625 ft.

PECOS COUNTY—Trans-Pecos Oil Co.'s H. L. Thomas 1, sd 475 ft; Bennette et al 1, sd 1245 ft; Turney 1, sd 2610 ft; Johnson-Troy 1, sd 2965 ft. Southern States Lease & Prod. Co.'s J. M. Odem 1, sd 1205 ft. Oregon-Texas Oil Co.'s Turney 1, sd 3520 ft.

REEVES COUNTY—Dixieland Oil Co.'s Oates 2, water trouble 4505 ft. W. S. Troy et al's H. G. Hersheusen 1, sd 415 ft. Bell Reeves Oil Co.'s Findley et al 1, sd 1540 ft. El Paso-Saragosa Oil Co.'s George Wirt 1, sd 540 ft. Parker-Hancock Oil Co.'s Johnson 1, sd 1930 ft. Willoughby Pet. Co.'s W. D. Cowan 1, sd 610 ft. Rodenbaugh & O'Connell's W. D. Casey 1, sd 845 ft. Pico Pet. Co.'s Johnson 1, sd 1930 ft. Texas Drilling & Dev. Co.'s Pecos Valley 1, sd 1105 ft.

RUNNELS COUNTY—Russel Prod. Co.'s Russell 1, sd 2500 ft.

SCURRY COUNTY—Col. A. E. Humphreys et al's H. P. Welborn 1, setting 8¼-inch cas 2135 ft. Camp Springs Oil & Gas Co.'s L. E. Howell 1, lcn; W. R. Quinn 1, sd 3005 ft; W. V. Jones 1, sd 605 ft. Hermleigh Oil & Gas Co.'s J. W. Burris 1, sd 3005 ft. Stanton Oil & Gas Co.'s J. W. Riley 1, sd 3505 ft. C. C. Brandon's J. A. Kemp 1, lcn.

STERLING COUNTY—Co-Operative Lease & Dev. Co.'s Douthitt 1, bldg new dk, td 1775 ft. Fidelity Oil Co.'s Hull 1, sd for cas 1635 ft. Chicago-Texas Oil & Gas Synd.'s Durham 1, showing oil, sd 1[illegible] ft. Concho River Drilling Assn.'s George McIntyre 1, sd 500 ft.

TAYLOR COUNTY—Sanger Oil & Ref. Co.'s Hale 1, sd for cas 3070 ft; Tom Sawyer 1, dr 575 ft; Hollingshead 1, rigging up. Abilene-Texas Oil Co.'s J. C. High 1, sd 2135 ft.

TERRELL COUNTY—Southwest Texas Oil & Gas Co.'s S. W. T. No. 1, sd 3515 ft. Pittsburgh-Western Oil Co.'s Chas. Downey 1, sd 1260 ft.

TOM GREEN COUNTY—Ranger Investment & Dev. Co.'s Harris 1, fsh tools 3235 ft.

VAL VERDE COUNTY—East Del Rio Oil Co.'s E. F. Russell 1, dr 1800 ft. Independent Operators' W. F. & W. E Whitehead 1, showing oil, dr 2200 ft Hodge-Wright et al's Belle Moore Estate 1, dr 650 ft.

WARD COUNTY—Arthur Pitts Oil Co.'s Soda Lake 1, sd 2205 ft; River 1, sd 4675 ft. Cook & O'Brien's G. W. O'Brien 1, sd 1175 ft. Trans-Pecos Oil Co.'s Longnecker 1, sd 1765 ft.

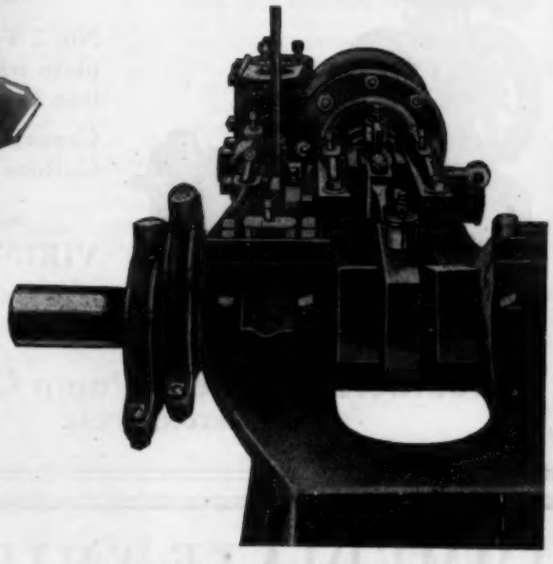
A NEW HIGH STANDARD

of performance is set by the New Improved Type "B" Titusville Acme Steam Drilling Engine—an improvement in design made possible by more than a half century of studying and building **Oil Field Engines.**

Type "B"—The New Improved Titusville Acme Steam Drilling Engine, with outboard bearing.

The new type "B" **Titusville Acme drilling engine** is distinctive for its tremendous power reserve, flexibility and ease of operation.

TITUSVILLE OIL COUNTRY MACHINERY
BUILT WITH RESERVE RUGGEDNESS



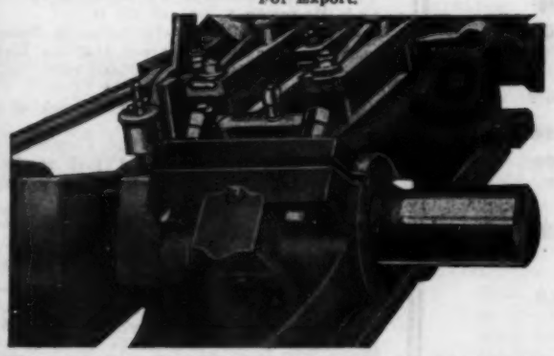
Extra heavy eccentric strap with riveted rods—Big Oil Pockets.

Some Other Distinctive Features:

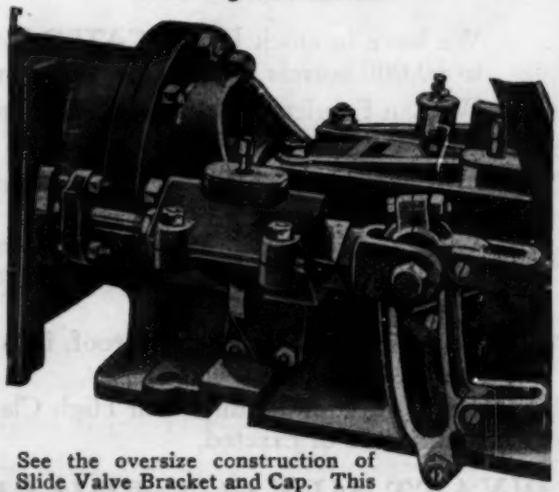
The water Pump is made with insert brass barrel, making it possible to use caps instead of plunger—also having a semi-steel jacket around the insert, extra heavy and wide bed that makes for smooth running, dust covers on the oil reservoirs, forged steel crank shaft ground accurately to size and tapped for attaching measuring lines, equipped for either regular two quart lubricator or Force Feed lubricator, fly wheel provided with three balance rims, hand forged Connecting Rod.

Manufactured by
THE TITUSVILLE IRON WORKS CO.
Titusville, Penna.

Affiliated Companies for Distribution:
THE CONTINENTAL SUPPLY COMPANY
For Eastern, Mid Continent, Coastal and Western Fields
THE REPUBLIC SUPPLY COMPANY OF CALIFORNIA
For California Fields
THE CONTINENTAL WELL SUPPLY COMPANY
No. 2 Rector St., New York City.
For Export.



The main bearings are made extra long—and are bored for die-cast babbit liners. This insures true alignment of crank with cylinder and makes it easy to renew the liner.



See the oversize construction of Slide Valve Bracket and Cap. This makes the slide stroke firm and gives large bearing surface. Note the lift of the short link from bottom that makes it easy.

North Texas Wildcats

COMPLETIONS

Company, Well, Location	Initial Production Bbls.	Depth
Clay County—		
Magnolia Pet. Co.'s Fee 10.....	¶¼	1530
Montague County—		
Texon Oil Co.'s L Crenshaw 1-A...	*	3030

(Note—This report does not include tests that have been shut down indefinitely.)

DRILLING REPORT

BAYLOR COUNTY—Batchelder & King's Mrs. E. S. Wallace 1, lcn. Cochran et al's J. W. Stevens 1, dk. B. Cranfill et al's W. B. Mills 1, dr 1160 ft. Independent Oil Co.'s Robertson County School Land 1, dk. C. B. Jetter et al's F. Gatzki 1, dk. Sunshine State Oil & Ref. Co.'s Mrs. E. S. Wallace 1, dr 1000 ft. Wurtz et al's Porter Ranch 1, dr 1240 ft.

COOKE COUNTY—Big Indian Oil Co.'s B. W. Davis 1, sd 3050 ft. Red River Drilling Co.'s Whaley Jones 1, sd 1300 ft.

COLLIN COUNTY—Cyle et al's Walters 1, sd 1500 ft.

CLAY COUNTY—Crude Oil Producing Co.'s Kinder 1, sd 1060 ft. J. T. Cumley et al's J. D. Stine 1, rigged up and sd. E. C. D'Yarmett's O. Bullington 1, dr 150 ft. Gulf Production Co.'s H. Boddy 1, dr 3500 ft; C. M. Worsham 3, dr 3750 ft. Hamilton et al's J. Harper 1, sd 800 ft. Kimbrough & Montgomery's B. L. Hansard 1, dr 400 ft. Lone Star Gas Co.'s N. H. Martin 3, set liner 1720 ft; Martin 4, dk; Withers 3, set cas 1590 ft. Menky et al's J. C. Hunt 1, dr 1525 ft. Nebraska Oil & Gas Co.'s W. H. Myers 1, bailing, 500 feet oil in hole, 3344 ft. Scaling Oil Corp.'s Geo. Scaling 1, sd 1900 ft.

DENTON COUNTY—Hill Crest Oil & Development Co.'s J. H. Rayzor 1, sd 1350 ft.

GRAYSON COUNTY—Zee Tex Oil & Development Co.'s G. W. Cannon 2, sd 3000 ft; Griffin 1, sd 2325 ft. W. R. Shankle et al's J. Marshall 1, dk.

KNOX COUNTY—Brazos Bend Oil Co.'s J. E. Clark 1, sd 2000 ft. White Oil Corp.'s Ward Ranch 1, sd 2815 ft.

MONTAGUE COUNTY—Bowie Chief Oil Co.'s C. H. Boedeker 1, sd 2725 ft. Boyd Oil Co.'s Mrs. M. H. Salmon 1, rigging up. Gulf Production Co.'s T. Benton 1, dr 3440 ft. P. F. Lesh et al's W. H. Wilson 1, cas trouble 1680 ft. Mascho Oil Co.'s J. L. Howard 1, ur 2750 ft. Texon Oil Co.'s L. Crenshaw 1-B, sd 1250 ft.

THROCKMORTON COUNTY — Adams & Kinnard's Reynolds Cattle Co. 1, dr 550 ft. Ashcraft et al's Polk Co. School Land 1, sd 1050 ft. Graves & Burton's Reynolds Cattle Co. 1, sd 75 ft. Hale Tex Oil Co.'s B. F. Reynolds 1, dr 780 ft; O. J. Woods 2, sd 400 ft.

WILBARGER COUNTY — Herrington & Robinson's McCaleb 1, sd 2500 ft. W. A. Matlock & Co.'s W. T. Waggoner 1, dr 1410 ft. Noble Oil Co.'s W. T. Waggoner 1, sd 1310 ft. South Vernon Oil Co.'s W. H. Stephens 2, dr 1000 ft; Stephens 3, dr 850 ft. T. & P. Oil & Coal Co.'s A. Smith 1, sd 700 ft.

Viking Twin Oil Pumping Units

Figure—15

FOR UNLOADING AND TRANSFER SERVICE

No. 2 Twin Outfit complete with 3 H. P. Gasoline Engine.

Capacity each pump 90 Gallons per minute.

Manufactured by

VIKING PUMP CO.

Cedar Falls, Iowa

Sold By

Southern Engine & Pump Company

HOUSTON, TEXAS

IMMEDIATE SHIPMENT

We have in stock FABRICATED TANKS up to 10,000 barrels for Immediate Shipment.

We can Fabricate tanks for Quick Delivery up to 25,000 barrels from our stock of Plates at DALLAS.

NO LONG DELAYS IN TRANSIT.

Our facilities for erection in this territory are excellent and where quick service is imperative our service will satisfy you.

We can supply any type of roof, including Gas Tight or Water Seal.

Send us your inquiries for High Class Tanks, Fabricated or Erected.

WYATT METAL & BOILER WORKS

OFFICE & PLANT WEST DALLAS

Texas Panhandle Wildcats

COMPLETIONS

Company, Well, Location—	Initial Production Bbls.	Depth
Hutchinson County—		
Coline Oil Co.'s M. Sandford 1....	150	3220
Wheeler County—		
Skelly Oil Co.'s Davis Bros. 1.....	*	4490

DRILLING REPORT

(Note—The drilling report below does not show wells that are shut down indefinitely.)

CARSON COUNTY—American Ref. Co.'s S. B. Burnett 1, dr 1200 ft. Culbertson Bros.' V. B. Armstrong 1, sd 200 ft. Gulf Production Co.'s S. B. Burnett 3, reset cas 3150 ft. W. W. Silk et al's S. B. Burnett 3, fsh 2890 ft. The Texas Co's Mary C. Burnett 1, dr 2150 ft; Mary C. Burnett 2, dr 1550 ft; S. B. Burnett 3, ur 2880 ft. W. T. Waggoner's McConnell 1, rigging up, td 3030 ft.

GRAY COUNTY—W. H. Holmes et al's J. S. Morse 1, sd 1970 ft. The Texas Co.'s G. H. Saunders 1, fsh 2525 ft. Wilcox Oil Co.'s Coombs & Worley 1, lcn.

HEMPHILL COUNTY— Piney Oil Co.'s Hopkins 1, sd 3500 ft.

HUTCHINSON COUNTY—Humphreys Oil Co.'s Johnson Bros. 1, fsh 2600 ft. Montgomery Oil Co.'s Johnson Bros. 1, sd 1925 ft. Panhandle Refining Co.'s J. J. Perkins 1, sd 3260 ft. Producers & Refiners Co.'s L. Bivens 1-B, sd 2650 ft; making 75,000,000 cubic feet of gas. Watchhorn Oil Co.'s Cable 1, ur 1860 ft. Wilson et al's Johnson Bros. 1, fsh cas 300 ft.

MOORE COUNTY—Producers & Refiners Co.'s Masterson 1, set cas 800 ft.

POTTER COUNTY—Producers & Refiners Co.'s L. Bivens 1-A, set cas 3160 ft; Bivens 2-A, dr 2460 ft, making 22,000,000 cubic feet of gas.

ROBERTS COUNTY—Roy Schenck et al's O. Laughlin 1, sd 400 ft.

WHEELER COUNTY—Mid Continent Oil Synd.'s Ember 1, dk. H. C. Tyrell et al's F. E. Sheldon 1, dr 1820 ft. J. Whittington's Williams & Laycock 1, dr 2022 ft.

East Central Texas Wildcats

HENDERSON COUNTY—Hodges et al's Cade Bros. 1, (Dorsey survey) taking core 3185 ft. Miller & Kimbro's Dobbs 1, sd 3205 ft. Mutual Security Co.'s Browning 1, sd 3095 ft. Richardson Bros.' Cade Bros. 1, (Southerland survey) sd 300 ft.

HOPKINS COUNTY—Marland Oil Co.'s J. T. Cooperage 1 (N. Hamilton survey), ready to spud. Skelly Oil Co.'s McCowin 1, lcn. E.

Quaint Quality Quirks

Published When and Where the Spirit Moves, by

The Frick-Reid Supply Co.

Tulsa, Okla. Pittsburgh, Pa.

West of the Mississippi—Stores Everywhere

Quirk 7 April 5, 1924 Volume 1

OLD DOC SALVADOR insists that if all the boilers in the world were Donovan, boilermakers would lose their proverbial appetite for corn whiskey. And it is a fact that Donovan Boilers, even under unfavorable conditions, remain singularly free from those troubles which are supposed to drive to hard drink the boilersmith who makes a specialty of repairs.

"If you think, sir,"—Old Doc Salvador speaking, to the little man with the tortoise shell spectacles—"If you really think, sir, that the good old days of real craftsmanship are ended, you have never had the privilege—yes sir, the word is well used—the PRIVILEGE of owning a Donovan Boiler, and you don't know anything about the plant where they make 'em back in Parkersburgh, West Virginia."

No end of Oil Men share with Doc Salvador the knowledge that "the good old days of real craftsmanship" are not ended; and that they are exemplified and perpetuated, insofar as boilers go, by the products of that Donovan factory in old Virginia.

It is a fitting and significant thing that the first new boiler sold in the Stroud Oil Field was a 45 h. p. Donovan. The picture shows it on the truck en route to the location. Consider this fact soberly: This Donovan boiler will pay for itself many times over. Donovan Boilers are like other Frick-Reid products in that respect.

THERE isn't a business in the world more permeated with energy and enthusiasm than is the oil business.

When you find an Oil Man who thinks he is "all run down," the chances are that he is merely "all wound up."

It might be well, now and then, for the Oil Man to ponder the patience of the Chinese. Says Chwang Tsze: "The legs of the stork are long, the legs of the duck are short; you cannot make the legs of the stork short, neither can you make the legs of the duck long. Why worry?"

THE CORTEZ Oil Company, Tulsa, Oklahoma, can tell you about Axelson Equipment. The picture shows them getting ready to go into their well No. 2 on the J. Abraham Farm, with an Axelson Pump (working barrel), Axelson Sucker Rods, and a Noxon Stuffing Box (an Axelson product) on the ground.

It isn't likely that the Cortez folks will ever fully appreciate the Axelson Equipment which they are putting into this well. We say that because Axelson Pumping Equipment is the sort you install and then FORGET for long intervals.

No less an authority than Shakespeare said:

The evil that men do lives
after them,
The good is oft interred with
their bones.

That's just as true of Sucker Rods and Pumps and Stuffing Boxes as it is of men.

HAVE YOU ever thought about the different attitudes men assume toward their work? One field man is afraid the sand is about to be passed up in a drilling well, or that the rods are ready to part in a pumper. He keeps himself in a state of constant worry.

Another man, with just as much responsibility on his shoulders, is equally confident that everything will come out all right.

Here is a verse from Wallace Irwin:

"Suppose that this here vessel," says
the skipper with a groan,
"Should lose 'er bearin's, run away and
bump upon a stone;
Suppose she'd shiver and go down
when save ourselves we couldn't."
The mate replies,
"Oh, blow me eyes!
Suppose again she shouldn't?"

* * *

Cowper never intended it that way, but how is this for a word picture of a stenographer chewing gum, staring fixedly out of the window:

'Tis thus the understanding takes repose
In indolent vacuity of thought,
And rests, and is refreshed.

TO A LAYMAN this is a very prosaic picture. But to the experienced field man, there is always something about a Reid Power that looks good.

This is one of the twelve Reid Band Wheel Powers in the Iron Post Field, south of Bristow. It was installed by a Frick-Reid Power Crew for the Shaffer Oil and Refining Company, Section 11-14-8.

In Oil Country Equipment—the most *human* Organization in America

Say you saw it in The Oil Weekly

L. Smith Oil Co.'s Pippins 1, rigging up. Schriver et al's B. M. Harmon 1, sd 1155 ft. Kelsey et al's Brooks 1, lcn. John R. Lock et al's J. M. McGowan 1, (S. Tunnage survey), lcn.

HUNT COUNTY—Gulf Production Co.'s J. C. George 1, (E. Tidwell survey) lcn. Chas. Pettitt & Harlow Bros.' L. C. Cooper 1, (Jas. Cole survey) bailed dry sand 2460-74 ft, dr 2600 ft; McDaniel 1, sd 925 ft.

KAUFMAN COUNTY—Boyd Oil Co.'s B. T. Rand 1, (J. R. Reierson survey) top chalk 2472 ft, dr in chalk 2745 ft. Marland Oil Co.'s J. O. Hamilton 1, (J. L. Montgomery survey) lcn. Judge J. A. Germany-Harty et al's W. S. Kirby 1, (S. Edens survey) sd 1500 ft. F. E. Skinner-Lyles et al's Barrow Bros. 1, (R. A. Terrell survey) sd 740 ft. Kelsey et al's (was Roscoe et al) Watkins 1, trying to co 2850 ft. Trapshooter Reily et al's Porter 1, temp. abn 2955 ft.

FREESTONE COUNTY—Carter & Lytle's H. C. Hackney 1, bailed dry 3135 ft, to deepen.

MILAM COUNTY—Beverly Oil Co.'s Buer 1, dr 1510 ft; Ashley 1, sd 2185 ft. Culver et al's Bremond 1, sd 2865 ft. Texas Petroleum Developmen: Co.'s Batt 1, dr in lime 2870 ft.

NAVARRO COUNTY—Boyd Oil Co.'s L. A. Rutherford 1, (R. D. Newman survey) dr 400 ft. Cranfill Bros. & Penn et al's H. A. Barnett 1, (H. S. Simonton survey) dr 2700 ft. Mutual Oil Co.'s Mrs. C. W. Nowlin 1, (T. B. Harding survey) dr 2115 ft. Gilbert Johnson et al's L. Skiles 1, (D. R. Mitchell survey) lcn. Webster & Pickens' Guy M. Gibson 1, ur 3080 ft.

RAINS COUNTY—Marland Oil Co.'s King 1, (N. G. Crittenden survey) ready to spud. A. M. Yost & Halmack Oil Co.'s Margaret Tollett survey 1, lcn. Dalley et al's Brown 1, spd and sd. Lovewell et al's Hunt 1, dk. Jim Jefferies et al's Corley 1, temp abn 1425 ft

VAN ZANDT COUNTY—Brookins & Jenkins et al's R. P. Hughes 1, (E. Alvarado survey) rigging up. Marland Oil Co.'s John Blair survey 1, lcn. Van Zandt Oil & Gas Assn.'s Jones 1, (J. N. Holt survey) sd on top chalk 2153 ft. Terrell Oil Co.'s (Porter & Holmes) J. T. Dunbar 1, top chalk 2350 ft, sd in chalk 2500 ft.

San Antonio District Wildcats

ATASCOSA COUNTY—DeLange-Eiser Co.'s No. 2 Tom, waiting on cement to set at 2950 ft.

DUVAL COUNTY—Mar-Tex Oil Co.'s Ridder 1, dr.

JIM HOGG COUNTY—Miami-Balderas Oil Co.'s 1, dr. Richard et al's 1, dr. Diamond S. Oil Co.'s Doering 1, dr. Homer & Tyson's Tyson 1, dr 1125 ft. Weber Oil Co.'s Holbein 3, fsh 3465 ft. Humble Oil Co.'s No. 1, Sur. 41, dr. Zapata Oil Co.'s Thompson 3, spudding in. Fresno Oil Co.'s Hinnant 1, dr. J. W. Pippin's 2, dr.

LIVE OAK COUNTY—Grubstake Investment Assn's J. W. Nichols 3, waiting on rotary and pump; Jim Nichols 2, dr. Olcheweske Oil Co.'s J. M. Brown 1, dr. Lobo Oil Co.'s Reagan 6, dr below 1000 ft. Harkey Oil Corp.'s Herring 1 and 2, dr. McCoy's Rose Murray 3, lcn.

MAVERICK COUNTY—Eagle Pass Oil Co.'s 2, dr. Southern States' Indio 1, dr.

MEDINA COUNTY—Wheless' Jose de la Roche 1, dr. B. J. K. Oil Co.'s Adams 1, dr. California-Medina Oil Assn's Rothe 1, dr. Williams Oil Co.'s Jungman 1, Sur. 104, dr Middle States Oil Co.'s sur. 799 1, lcn. Charles Jackson et al's Adams, sur. 12, 1, lcn. Young et al's Tom Brendle 1, dr William Metzker's Ward 1, dk. Carl Bros.' Durst, sur. 15 1, dr below 1500 ft. Herman Haught's 1, sur. 459, dr below 700 ft. L. N. Knight et al's Wipff 1, sur. 16, dr below 200 ft. M. G. Haskell's Fritz Faselor 1, dr; Harrison 1, lcn.

McMULLEN COUNTY—Pioneer Prod. Co.'s Lowe 1, dr. San Balt Pet. Co.'s 5, spudding in. Pioneer Consolidated Pet. Co.'s Martin 1, dr 1681 ft. Bower Leasing Synd.'s Fisher 1, rigging up with star rig. Three Rivers Oil Co.'s Stitz 3, on pump. Arthur Inglis' Fisher 1, set liner. South Texas Oil Co.'s Brown 1, waiting on machinery; Calliham 3, dr below 400 ft. Geo. B. Pickett's Jacob 1, rigging up. Adams-Seifert's J. D. Mahoney 1, dr 280 ft. George E. Smith's Fisher 1, dr 800 ft. Grubstake Investment Assn's Lark 5, set packer, strong gas pressure; Jacobs 3, rigging up. Watkins-Hill's Lark 1, spudded in. Hoad & Scharbauer's 4, setting 10-in cas; 5, rigging up; 6, dk. Coyle-Concord Oil Co.'s 1, cemented 8-inch casing at 310 ft. B. C. Lightfoot & Sons' Lark 1, spudding in; 2, dk. Laughter & Naiper's Stitz 1, dr 1100 ft. L. E. Hill's Aycock 1, dr 1962 ft. Finnell's Byrne 1, dr 1550 ft. Wm. Lewrie's Lark 1, spudding in. M. S. Holiday's Stitz 1, dr below 200 ft. Southern Natural Gas Co.'s Lark 6, dk.

Coastal Wildcats

AUSTIN COUNTY—W. W. Johnson and H. R. Carroll's San Felipe De Austin Townsite Outlot 16, dr around 1050 ft.

BRAZORIA COUNTY—Texas Co.'s South Texas Dev. Co.'s 1, blk. 2, abn; 2, blk. 1, rigging up.

GONZALES COUNTY—Bryan & James' Billings 1, dr around 3000 ft.

HARRIS COUNTY—Texas Exploration Co.'s Warren 17, dr below 2000 ft; 18, lcn.

JEFFERSON COUNTY—Rycade Oil Corp.'s McFadden 2, dr at 5166 ft.

FORT BEND COUNTY—Pathfinder Oil Co.'s Davis Trustee 1, dr below 800 ft.

MATAGORDA COUNTY—The Rycade Oil Corp.'s Gray 1, at Markham dr at 2956 ft; Hudson 2, at Markham, dr 3683 ft.

Rhode Island Unions

Flange Type

A Three Piece Ground Joint Flange Union with bronze seat, designed by practical oil men.

Full Floating Ring of great assistance in making up.

Sold by the Leading Supply Houses

Rhode Island Fittings Co.
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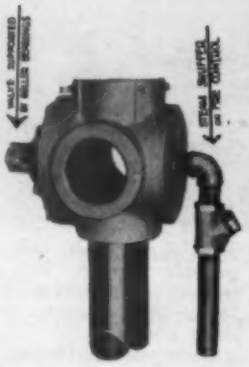
The New and Improved PALMER CONTROL HEAD



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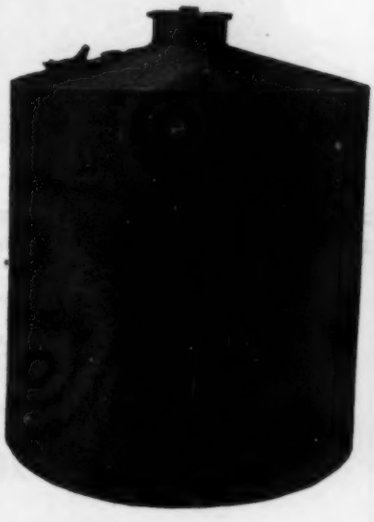

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Louisiana Wildcats

COMPLETIONS

Company, Wc'l, Location—	Initial Production Bbls.	Depth
Caddo Parish—		
Louisiana Pet. Co.'s Brewer 1, 23-23-16	*	2952
La Salle Parish—		
Urania Pet. Co.'s Urania 3, 20-10-2e	*	1620
Webster Parish—		
Smitherman & McDonald's Boucher 1, 21-23-11	¶8-‡	2697

DRILLING REPORT

BIENVILLE PARISH—Arkansas Fuel Co.'s Harrel 1, 6-18-5, dr 2770 ft.

BOSSIER PARISH—Atlantic Oil Prod. Co.'s Bodcau 1, 24-23-12, dr 325 ft; Bolinger 1, 29-23-11, lcn. Bolinger et al's Bodcau 1, 15-23-12, set 12½-inch 267 ft.

CADDO PARISH—Alabama Pet. Co.'s Barlow 1, 5-21-15, sd 3752 ft. Brewer et al's Sharp 1, 15-18-16, sd 2750 ft. Caddo Western Gas Co.'s Gardner-Blades 1, 2-16-15, sd 2600 ft. Collins et al's Levy 1, 23-19-14, dr 650 ft. Crude Oil Co.'s Alexander-Ledbetter 1, 27-16-14, dry 3176 ft; dr 3205 ft.

CALDWELL PARISH—Culver et al's Culver 1, 21-14-4e, dr 20 ft.

CLAIBORNE PARISH—Block O. & G. Co.'s Aubrey 1, 20-21-8, sd 1610 ft. Collins & Woodley's Reynolds 1, 30-21-4, dk tmbrs. El Dorado Chief O. & G. Co.'s Gandy 1, 36-22-7, dr 1355 ft.

DE SOTO PARISH—Terrell et al's Porter 2, 15-12-13, dk. Ulrey et al's Frost-Johnson 1, 3-11-15, to set 6-inch 2680 ft.

LA SALLE PARISH—Helm & Burch's Urania 1, 21-11-2e, dr 800 ft. Stovall Drlg. Co.'s Central Lumber 1, 27-10-2e, dr 615 ft.

LINCOLN PARISH—McCauldin et al's Hudspeth 1, 28-20-4, dk.

OUACHITA PARISH—Haynes O. & G. Co.'s Dixie Lbr. 2, 17-17-3e, dr 2720 ft.

UNION PARISH—Allison et al's Heard 1, 25-23-1w, lcn. Cargile et al's Heard 1, 25-21-3w, dr 1100 ft. Davidson & Palmer's Frost-Johnson A-1, 17-23-1e, sd 77 ft. Dawson & Perritt's Hodges 1, 27-19-13, dk tmbrs. Feazel et al's Green 1, 19-23-1e, sd 80 ft. Gulf Ref. Co.'s Green 1, 19-23-1e, sd 2420 ft; Security Trust 1, 23-23-1w, to dr 4½-inch plug 2400 ft. Johnson et al's Pryor 1, 35-22-2w, rig. Lide et al's Templeton 1, 18-23-1e, set 6-inch 2172 ft. Love & Clark's Frost-Johnson 1, 7-23-1e, dr 1050 ft. Neddo Petroleum Investment Corp.'s Smith 1, 2-23-3w, to skid over. Noe et al's Gulley 1, 36-21-1e, dr 2300 ft. Ohio Oil Co.'s Adkins 1, 30-23-1e, dk tmbrs.

WEBSTER PARISH—Fortuna Oil Co.'s Pruitt 1, 17-21-9, dr 2655 ft; Staten 1, 31-22-10, dr 3295 ft. Humble O. & R. Co.'s Babb 1, 14-21-10, dr 1100 ft. Ohio Oil Co.'s Merritt 2, 14-21-10, lcn. Olmstead et al's Hudson 1, 17-19-10, rig. Stack & Egger's Bible 1, 8-20-9, dr 1040 ft. White Oil Corp.'s Gleason 1, 31-22-9, dr 1940 ft.

WEST CARROLL PARISH—Arkansas Fuel Oil Co.'s Fiske 1, 8-21-10e, lcn. Orion Oil Co.'s Bain Wagon 1, 23-23-10e, setting 10-inch 1000 ft.

Arkansas Wildcats

COMPLETIONS

Company, Well, Location—	Initial Production Bbls.	Depth
Cleveland County—		
Southern Arkansas Oil Co.'s Moore 1, 27-9-10	*	3324
Grant County—		
The Texas Co.'s Chicago Land & Timber Co. 1, 14-6-13	*	2775
Ouachita County—		
Peltier et al's Eagle Mills Lbr. Co. 1, 25-12-16	*	2310

DRILLING REPORT

CALHOUN COUNTY—Harris & Bickley's Freeman-Smith 1, 26-16-13, sd 1152 ft. Vitex Oil Co.'s Adams 1, 29-12-12, to test 2958 ft.

COLUMBIA COUNTY—Brown et al's Robinson 1, 23-18-23, sd 2895 ft. De Soto & Hickman's Fullenwilder 1, 3-16-21, sd 1070 ft. Dowdy et al's Fullenwilder 1, 12-17-22, sd, showed oil 2234 ft. Houston Oil Co.'s Baker-Joiner 1, 2-18-22, dk. Hosey et al's Haire 1, 30-19-18, sd 2156 ft. Kemp et al's Emerson 1, 7-19-19, dr 620 ft.

DREW COUNTY—Graves et al's Karnes 1, 10-13-6, set 6-inch 1748 ft.

GRANT COUNTY—The Texas Co.'s Chicago L. & T. Co. 2, 16-6-13, rig.

HEMPSTEAD COUNTY—Dudney et al's Spates 1, 19-12-27, sd 2000 ft. Hope Columbus Oil Co.'s King 2, 24-11-24, to re-set 4½-inch 2130 ft. Martin et al's Adams 1, 36-12-27, dry 2214 ft, sd 2216 ft. Meyer et al's Nicholls 1, 17-11-25, fsh 1870 ft.

LITTLE RIVER COUNTY—Gaines et al's Thomas 1, 15-13-29, dr 2400 ft. Grote et al's Allen 1, 2-13-29, dr 2645 ft. Johnson et al's Hawkins 1, 10-11-31, dr 1090 ft.

MILLER COUNTY—Kress et al's Thompson 1, 33-14-28, dr 740 ft.

NEVADA COUNTY—Dudley et al's Grayson-McLeod 1, 32-11-21, dr 600 ft. Kan-Ark. Pet. Co.'s White 1, 11-13-21, dr 2110 ft.

OUACHITA COUNTY—Amerada Pet. Co.'s Lester Mill Co. 1, 9-13-19, dr 2675 ft. Jimmie Cox's Burton 2, 30-15-17, sd 2190 ft. Eck & Boger's Criner 1, 21-15-19, dk. Foster et al's Harvey 1, 32-11-19, sd 1955 ft. Hopkins et al's Allen-Curry 1, 33-14-19, sd 2125 ft. Pure Oil Co.'s Moline 1, 21-11-17, dr 2515 ft.

UNION COUNTY—Bondurant et al's Turbeville 1, 9-18-12, dr 2010 ft. Ray et al's Long 1, 28-16-14, sd 2171 ft. Starke et al's Little 1, 21-19-12, setting 6-inch 2160 ft. Tarver et al's Sample 1, 36-19-13, dr 2405 ft. Traffic Oil Co.'s Goodwin 1, 20-16-14, dry 2085 ft, to deepen.

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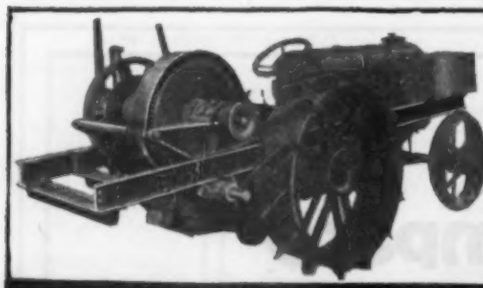

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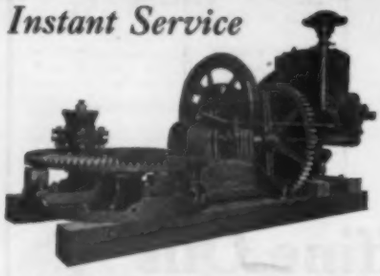

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California Wildcat Well Shows Oil at 992 Feet

Los Angeles, Calif., March 28. — A meeting of the stockholders of the Los Angeles Investment Company has been called for April 1 to decide upon leasing additional company owned land near Inglewood in Los Angeles County to the Standard Oil Company or some other concern, due to offers to lease the land after a shallow showing of oil in the well drilled by the Standard on the company's land.

According to the call for the meeting, the hole has been drilled to 1027 feet, after setting fifteen and one-half inch casing at 992 feet. The hole logged blue shale, streaks sand showing oil and gas 992 to 1021 feet and oil sand showing both oil and gas from 1021 to 1027 feet. It is reported that the oil is of light gravity.

The Standard has a lease on 400 acres and the Investment company has about 1000 acres in addition which it seems that oil companies will now be bidding for.

Oklahoma Wildcats

ALFALFA COUNTY—McGinnis & Ward's Watts 1, C NE SW SE 21-27-10w, r 2410 ft. Armstrong, Henley & Piffles' Turnbull 1, C NW SE NW 23-24-11w, sd 50 ft. Haley, Barber & Pulse's Joe Guinn 1, C NE SE 15-24-9w, dr 2255 ft.

ATOKA COUNTY—McPhearson et al's Wild 1, SWc NW 7-2-9, sd 3700 ft. Hanson et al's Dabney 1, C SE NW 17-4-11, sd 100 ft. J. F. Torrence et al's Fee 1, SWc NE 1-2-9, sd 1350 ft. Wapanucka Dev. Co.'s Underwood 1, C W L SE SE 28-2-9, sd 1700 ft.

BECKHAM COUNTY—Bollion Oil Co.'s Green 1, SW SW 34-10-24w, sd 1360 ft. Ship-Nash et al's No. 1, SEc NW 35-9-25w, dr 2525 ft. J. A. Pringle's Burkholder 1, C NE NE 6-9-24w, dr 3500 ft. Burlingame & Dovel's Dugger 1, SEc NW NE 25-10-23w, sd 525 ft.

BLAINE COUNTY—Thompson et al's Dickerman 1, C SE SE SE 26-15-12w, sd 3213 ft. Meyers et al's Chronister 1, SEc NW NE 7-18-16w, sd 965 ft. Okomo Oil Co.'s Edlemaier 1, SWc 21-15-10w, dr 625 ft.

BRYAN COUNTY—Lyon et al's Coombs 1, SEc SW NW NE 11-8-9, rig. Berlieu et al's Ramsey 1, NWc NE NE 32-7-8, sd 2475 ft. Alexander's Hampton 1, SEc NE 26-7-11, rig.

CLEVELAND COUNTY—Garr Oil Co.'s Holland 1, NEc SE 31-10-4, sd 2620 ft.

CUSTER COUNTY—Hoover Oil Co.'s No. 1, NWc SE 34-13-14, sd 2510 ft.

COAL COUNTY—Basie Oil Co.'s Heck 1, SEc 18-2-9, rig. Bearman et al's Payte 1, SWc NW NE 32-2-9, sd 2780 ft. Guy Vaughan's Nichols 1, SWc 1-1-11, rig; Downard 1, NWc SW 16-2-10, sd 3260 ft. McPherson et al's Jamison 1, NWc NE NE SW 24-1-8, sd 300 ft. Empire Walker 1, C SE SE 4-2-9, rig.

GRANT COUNTY—Ossenbeck et al's Hoffman 1, SEc 23-29-3w, sd 3285 ft. Embry et al's Edwards 1, C SE SE NW 20-26-4w, dr 1000 ft. Day Oil Co.'s Vandatta 1, SWc NW 8-26-2w, sd 1270 ft.

GREER COUNTY—Western Nat. Gas Co.'s De Armond 1, NWc SW 23-7-23w, dr 2210 ft. Neal et al's Johnson 1, SEc NE NW 3-7-22w, sd 620 ft. White & Debolt's Bowman 1, SWc NE SW 26-7-22w, dr 500 ft.

HUGHES COUNTY—Flescher Pet. Co.'s Smith 1, NWc NE NW 8-9-12, sd 3530 ft. W. J. Thurber's Foster 1, SEc SW SE 5-7-8, plugging back to 1808 ft. Paraffin Oil Co.'s Love 1, NEc SE NE 13-7-12, dr 3720 ft. Middle States Oil Co.'s Arn 1, NWc 13-6-11, side tracking cas, td 3585 ft.

JACKSON COUNTY—Douglas Oil Co.'s Jackson 1, NWc SW SE 20-3-20, dr 3538 ft.

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JEFFERSON COUNTY — Magnolia Petroleum Co.'s Peck 1, C NE SW NW 4-3-6w, sd 2980 ft. Gant et al's Skelton 1, C NE NE NW 22-3-6w, sd 3017 ft. Shawver et al's Anderson 1, SEc NE 31-4-8w, sd 1200 ft. J. C. Cook Oil Co.'s Gibson 1, C NW NW NW 36-5-8w, dr 2420 ft.

KAY COUNTY—Ostot Dev. Co.'s Rohoe 2, C NW NW SE 3-27-1, dr 3432 ft. Alcorn Oil Co.'s Mills 1, C NW SE 24-26-1, dr 3470 ft; Hadley 1, NEc 2-26-2, co 1758 ft.

KIOWA COUNTY—Conner et al's No. 2, NEc NW NW 34-7-16, crooked hole sd 1460 ft.

LINCOLN COUNTY—Sun Ray Oil Co.'s Gallagher 1, C N L SE SE 18-13-5, sd 2405 ft. Flynn & Morgan's Baker 1, SEc 2-14-5, dr 1665 ft. Magnolia Pet. Co.'s Wilson 1, NWc SW SW 18-14-5, rig. H. F. Wilcox O. & G. Co.'s Smulian 1, NWc SE NW 2-13-6, dr 4100 ft. P. & R. Corp.'s Hainzig 1, SWc NW SW 14-13-6, dr 660 ft. Douglas Oil Co.'s Ewing 1, NWc 7-13-3, dr 1005 ft.

LOGAN COUNTY—Buford-Brim Oil Co.'s Newman 1, NWc NE 32-19-3w, sd 2480 ft. Leeright et al's Bean 1, C SE¼ 28-16-1, rig. Okla. Drlg. Co.'s Johnson 1, SEc SW 36-15-2w, sd 1716 ft. Franklin Oil Assn.'s Moore 1, NWc SE SE 28-18-4, sd 1725 ft. McMunn & Nixon's Fields 1, SWc NE SE 35-17-4w, sd acct. storm.

LOVE COUNTY—Wickenheiser et al's Beal 1, NEc SE NW 13-5-3, sd 2465 ft. Drillers Syndicate Oil Co.'s Wilson 1, NWc NE 11-7-2, sd 2830 ft.

McCLAIN COUNTY—Day Oil Co.'s Ball 1, SEc NW NE NE 9-5-3, dr 2580 lt

MARSHALL COUNTY — Magnolia Pet. Co.'s Everett 1, C NE NE SE 36-7-5, dr 3700 ft. Van Vleck's Chaffin 1, C SE NW NW 27-5-4, dr 3380 ft. Winters et al's Purday 1, SWc NE SE NE 18-6-7, sd 720 ft.

OKLAHOMA COUNTY — Firestone Oil Co.'s School 1, NWc SE 36-11-3, sd 3470 ft. Big Three Oil Co.'s Wild 1, SWc NE 31-1-2, rig down td 1390 ft.

PONTOTOC COUNTY—Harper et al's Dener 1, NWc SE SE 19-5-7, sd 850 ft. Smith et al's Norris 1, SWc SE 34-4-6, fsh 2430 ft. Riverside Oil Co.'s McFarland 1, NWc NE NW 4-5-5, sd 650 ft. Boles & Smith's Stringer 1, NWc SW 34-5-6, dr 1150 ft. Lloyd & Smith's Lloyd 1, NEc NW SE 6-3-7, dr 160 ft.

POTTAWATOMIE COUNTY — Ossie Oil Co.'s Howell 1, SWc NE 13-10-2, r 2595 ft. Magnolia Pet. Co.'s Brendenberg 1, C SE SW NW 18-7-5, dr 2925 ft. Davey Detrick's McGahey 1, SEc 10-6-2, dr 2855 ft. H. G. Guinnup's Floyd 1, SWc SE 13-11-2, dr 2760 ft. North American Oil Co.'s Madgett 1, NWc 25-10-4, sd 340 ft. Maud Oil Products Co.'s Yinson 1, NEc NW 18-7-5, dr 1150 ft. McMann Oil Co.'s Neghan 1, SWc NW 19-7-4, sd 100 ft.

ROGER MILLS COUNTY—Twin Hills Oil Co's McClure 1, NWc 15-15-26w, sd 2370 ft. Colorado Oil Co.'s No. 1, C NW NW NW 32-16-22w, fsh 2237 ft. Mutual Oil Co.'s No. 1, C NE NE NE 1-16-21w, fsh 2485 ft. Martin et al's Kelly 1, C NW SE 32-12-26w sd 460 ft.

SEMINOLE COUNTY—Ossenbeck et al's Davis 1, C SW NE 10-8-7, r 3340 ft. Wm. McDougall's Belle Dindy 1, C SW SW 20-6-7, dr 2540 ft. Maxwell et al's Carty 1, C NE NW 36-6-6, dr 890 ft. Link Oil Co.'s Carolina 1, C SE NW 14-6-7, dr 2200 ft. T. B. Slick's Sanny 1, SWc 18-6-7, dr 1550 ft.

TILLMAN COUNTY—Luffborough et al's Finley 1, SWc NE NW 23-2-17w, sd 3200 ft. Marshall Bros.' Riverbed 1, SWc NE NE 8-5-14w, co 1524 ft. Battles & McBride's Duncan 1, SWc NE 7-2-18w, sd 1800 ft.

WASHITA COUNTY— R. B. Hartman's Montgomery 1, NEc SW NE 23-9-17w, sd 3060 ft. Santrock Bros.' No. 1, SWc NE 20-8-16w, sd 2905 ft, blowing gas. McCoy et al's Pretters 1, C SW SW NE 9-8-15w, r 1720 ft.

Kansas Wildcats

BARBER COUNTY—R. B. Brown's No. 1, NWc NW NW 33-30-14, dr 3400 ft.

BARTON COUNTY — Cheyenne Oil Co.'s Sooy 1, SWc SW 27-16-12w, fsh 3525 ft. McMinn et al's Baker 1, SWc 5-18-13w, sd 760 ft. Haynes et al's No. 1, SWc SW 31-18-12w, dr 760 ft. H. W. Nieswanger's Everleigh 1, SW SE 1-18-12w, lcn; Weiker 1, SW SE 2-19-12w, sd 1090 ft. Mountain States Oil & G. Co.'s No. 1, SEc NE 22-18-13w, dr 2800 ft. McMahan & Sampter's No. 1, NWc 21-19-12w, dr 2200 ft.

COFFEE COUNTY—Sunbeam Pet. Co.'s Andrews 1, NWc NE 33-20-15, rig. Thad O'Day's Allen 1, NWc SE 13-21-15, sd 900 ft.

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Pratt Oil Co.'s Bumgrave 1, NEc NW 7-23-15, dr 1380 ft.

FINNEY COUNTY—Garden City O. & G. Co.'s Wann 1, SEc SE 36-21-30, sd 2890 ft.

JEFFERSON COUNTY—Northern Counties' Edward's 1, SEc NW NW 13-9-19, fsh 3400 ft.

OSBORNE COUNTY—Liggett et al's Worley 1, NWc NW 34-10-15w, rig. Delhi Oil Co.'s Forman 1, SWc SW 20-10-11w, sd 3250 ft.

OSAGE COUNTY — Sharpless & Stark's Kirklen 1, SEc NW 36-17-14, lcn. Rodgers & Bittle's Bertha 1, SEc NW 28-17-15, lcn. Mul-Vit Dev. Co.'s Neil 1, NEc NW SW NE 8-17-17, sd 2735 ft. Moyer et al's Williams 1, NEc SW NW 12-18-14, rig.

POTTAWATOMIE COUNTY — Crawford et al's Stewart 1, C E L SE SE SE 17-9-12, rig; Geischabert 1, SWc SE SW SW 31-9-12, rig; St. Mary's 1, SWc 11-1-12, sd 2290 ft.

RICE COUNTY—H. T. Proctor's Taylor 1, NWc 15-21-10w, lcn. Rino Oil Co.'s Dees 1, SEc SW NW 35-19-6w, rig.

RILEY COUNTY—Richie et al's Boyle 1, SEc 36-7-4, sd 2600 ft. Welton Oil Co.'s No. 1, NWc 20-10-12, sd 1600 ft. Pawnee Oil & Gas Co.'s Marks 1, SWc NE NW 26-10-6, sd 1700 ft.

RUSSELL COUNTY — Valerius Oil Co.'s Munsell 1, NWc NE 17-12-15w, rig; Phillips 1, SWc 3-13-13w, dr 720 ft; Oswalt 2, SEc SW 8-12-15w, rig. Merriam et al's Murphy 1, C SW 11-12-12w, lcn. T. O. Lillystrand's Haise 1, SEc NW 31-12-14w, lcn. Streeter & Stearns et al's Oswalt 1, SEc NW SW 8-12-15w, rig. P. & R. Corp.'s Haise 1, NWc SE 24-12-15w, rig. Patton et al's Wolbridge 1, SWc NE 4-13-15w, skidding rig. Merriam & Findeis & Sutter's Milke 1, SWc SE SW 20-12-15w, tmbrs. Hames, Findeis & Stearmns' Dodge 1, SEc SW 29-11-15w, lcn.

SEWARD COUNTY — C. T. Development Co.'s Wood 1, NWc SE 4-34-34, sd 700 ft. Seward O. & G. Co.'s Seeley 1, NEc NW 20-33-33, sd 2427 ft. Traders O. & G. Co.'s Bunting 1, SWc NE SW 4-25-34, rig burned, td 1600 ft.

SUMNER COUNTY—Collins & Frantz's Young 1, SEc NE 33-33-2, dr 2100 ft. Champlin Ref. Co.'s Heskett 1, SEc 34-10-1w, r 1990 ft . Phillips Pet. Co.'s Stewart 1, SEc NE 12-31-1w, rig.

TREGO COUNTY—Morton et al's Kyser 1, C E½ 9-11-22, fsh 1405 ft.

WASHINGTON COUNTY—Barnes O. & G. Co.'s Wickham 1, SEc SW 9-5-5, sd 1305 ft.

WOODSON COUNTY—Equity Oil Co.'s Solomon 1, SWc NE NW 30-26-17, sd 2960 ft. Hazlett et al's Hines 1, C NE NE NE 30-25-16, fsh 1340 ft; Rash 1, NWc NE 5-25-16, sd 350 ft.

Robinson Packer Interests Open New Factory Branch

Blackwell, Okla., April 2.—Two of the Robinson brothers from El Dorado, who have been connected with the A-1 Packer Corporation there, have removed to Blackwell and will start up an oil well packer manufacturing plant here, having acquired the building and site of the Lek-Tro Manufacturing Company.

The A-1 Packer Corporation will continue to maintain a factory and office at Eldorado, Kansas, and also in Tulsa.

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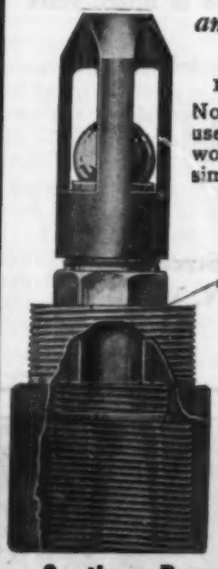
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Seek Exemption of Oil From Merchant Marine Act

Washington, D. C., March 26.—Petroleum products should be excepted from the operation of the preferential rail rate provisions of the Merchant Marine Act, representatives of oil exporters told the traffic committee of the United States Shipping Board during the course of a stormy hearing on March 25. Unless this is done, the board was told, it will be impossible for the oil exporters to do business, because of an insufficiency of American tanker tonnage.

E. B. Dow, counsel for the Western Petroleum Refiners Association, and W. H. Reed, representing the Sinclair Refining Company, appeared in opposition to section 28, which is the preferential provision of the law. With only 393 American tankers, Mr. Dow declared, it would be impossible for exporters to operate under that section. Of the total number of American tankers, 50 belong to the shipping board. Seven of these are concrete and useless, he said, 13 are under charter to oil companies, and 14 are out of commission. There are a thousand tankers flying foreign flags, but even with the combined facilities there are times when it is impossible to charter tanker suitable to the requirements of the independent exporter.

Asking that petroleum products be classified with grain, on the ground that there was not sufficient American tonnage to handle these commodities, Mr. Reed declared that the independent refiners and exporters could not continue in business under any law prohibiting fair competition. The enforcement of section 28, so far as it relates to petroleum products in bulk, would destroy the export market for independent refiners located in the interior, because the discrimination in freight rates from the refining point to tidewater would increase export rates more than 100 per cent if the products were moved overseas in foreign vessels

The matter is of especial importance to Western concerns, those in the East not being interested, and the oil men were emphatic in their statements that enforcement of section 28 would be ruinous to independent interests.

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TEXAS OIL MAPS
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Catalog on Application
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Many Permits Granted for Wells in Cacalilao Area

Tampico, Tamps., March 28.—During the period from March 5 to 18, 64 drilling permits were granted by the Department of Industry, Commerce and Labor.

Of this number 33 were for Cacalilao, 21 were for the Panuco district outside Cacalilao, and the remainder were for wildcat tests in the nearby regions.

The greatest number of permits went to the Transcontinental Petroleum Company, which will drill 11 wells. Permits for six wells were granted to the Empire Gas and Fuel Company.

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For IMMEDIATE disposal. High class desirable acreage right in with largest Mid-Continent oil companies now starting extensive development program. This is not cheap or off-structure acreage but a BARGAIN and will merit your investigation. All 10 year leases and low rental. Exceptional opportunity for solid smaller companies to get into a field which has, without question, tremendous possibilities. Write for maps, prices, etc.
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References: Texas National Bank, Ft. Worth, Texas.

Richard Lee, representing the Chas. N. Hough Manufacturing Company of Franklin, Pennsylvania, is on a tour of the western and Mid-Continent oil country.

R. S. Hill, chief engineer of the National Supply Companies of Toledo, Ohio, recently visited at the Casper, Wyoming, offices of the company and at other points in the Rocky Mountain territory.

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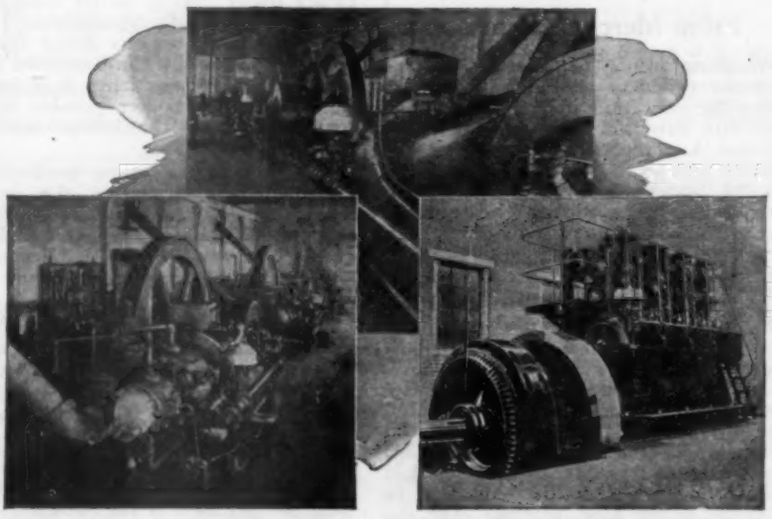
Sixteen Years Night and Day Operation



Two views of oil engines furnished The Gulf Pipe Line Co. and shipped by us in July, 1907, and one view of our latest type Vertical SI Engine

We furnished the Gulf Pipe Line Co. 85 of these oil engines which are still in operation in Texas, Oklahoma and Louisiana, driving pumps for pumping oil through the pipe lines, and all of them having been operating at least 80% of the possible operating time day and night for periods ranging from ten to sixteen years.

These engines have recently been changed over to our latest SI type and it is expected that they will continue to run for ten or fifteen years more.

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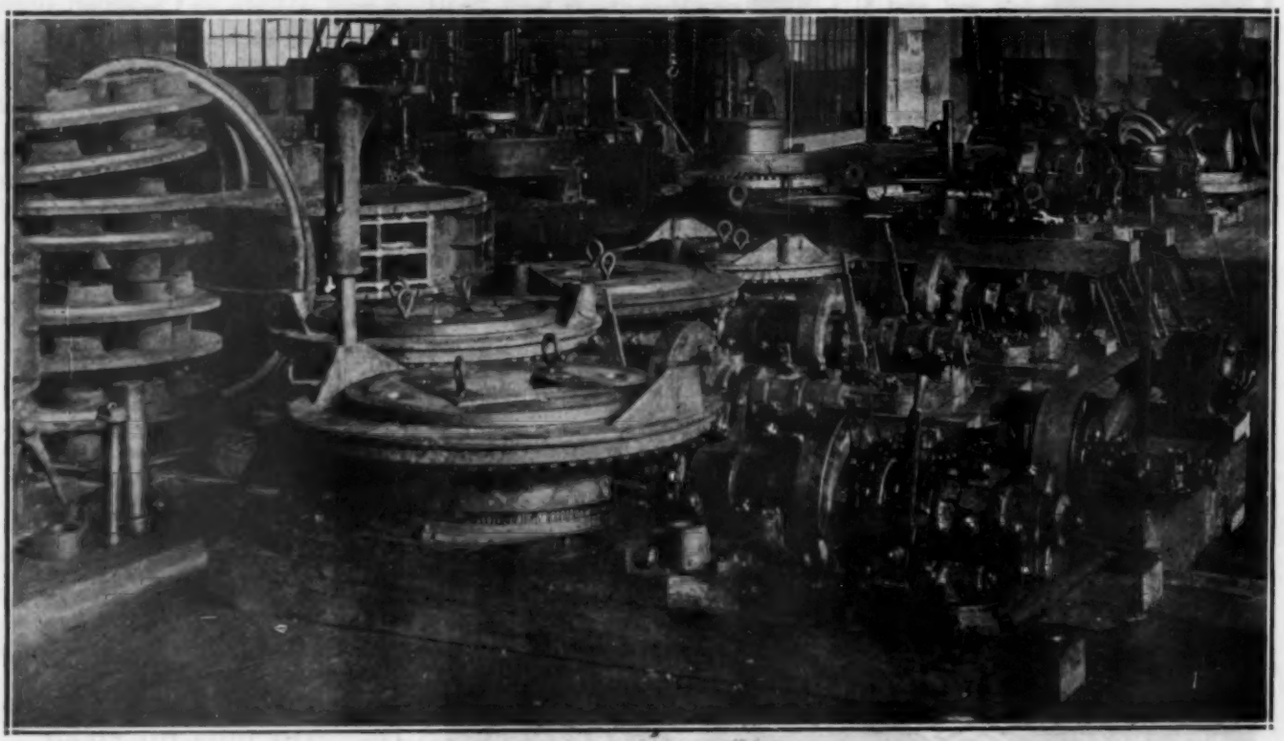

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A. J. Carr, Sales Agent, Lufkin, Texas

Say you saw it in The Oil Weekly

Manufacturer and Supply Dealer Notes

Shreveport Supply Company Enlarges Plant Facilities

Shreveport, La., April 4.—The W. K. Henderson Iron Works and Supply Company of Shreveport, Louisiana, has announced its plans for the construction of a modern and up-to-date foundry unit just outside of the city limits of Shreveport.

The new location of the foundry faces the main paved highway between Shreveport and Texarkana and occupies an area of about 15 acres, one entire side fronting on the Texas and Pacific Railroad tracks, giving ample switching facilities and enabling the economical handling and storing of raw materials.

Complete new modern equipment will be installed throughout. The equipment contemplated includes two electric steel furnaces and two grey iron cupolas.

Frank D. Chase Inc., foundry engineers, is in charge of design and layout. Mr. Chase himself is now on the ground and plans are being drawn to push this plan through to rapid completion.

The building will be constructed by Leonard Construction Company of Chicago, Illinois.

This business was established about 27 years ago by W. K. Henderson. It was the outgrowth of a desire on the part of Mr. Henderson for satisfactory machine shop and foundry works for his string of saw mills owned and operated by him in East Texas and West Louisiana years ago. Its growth has been rapid and today it is considered among the prosperous and efficient concerns of its kind in the country.

In addition to specializing on a small saw mill and a portable saw mill, a line of steel fittings used extensively throughout Louisiana, Texas and Arkansas in oil field and pipe line work are manufactured. This includes tees, ells, flanges, couplings, river clamps. In the oil well supply line, this company manufacturers the Henderson Beam Pump, tool joints, bits, elevators, fishing tools, vacuum pumps, steam engines and a general-and varied line of other oil well supplies.

Cunningham Sales Manager Off on Extended Trip

Tulsa, Okla., April 2.—Setting forth on a trip through the oil country in the East and Middle West that will extend over some 3000 to 4000 miles, E. W. Miller, sales manager of the Cunningham Company of Tulsa, is leaving Sunday on the first lap of a journey that will carry him to St. Louis, Pittsburgh, Philadelphia, New York and other points.

The first stop will be St. Louis where Mr. Miller will confer with officials of the Continental Supply and Jarecki Manufacturing Companies and other dealers in oil well supplies. From St. Louis the journey will be to Marion, Indiana, where is located the Marion Machinery Foundry and Supply Company. From Marion he will proceed to Toledo, Ohio, to visit the National Supply Company and from thence to Bradford and Pittsburgh. He will visit the Oil Well and Frick-Reid Supply Companies at the latter place. New York will be visited to confer with several of the large importers of oil well supplies and equipment. On the return trip Mr. Miller will stop off at his old home in Rochester, New York.

In all Mr. Miller expects to be absent from Tulsa about thirty days. The Cunningham Company which he will represent on the trip manufactures several well known oil field tools, including the Standlee swivel swabs Cunningham safety elevator. Myracle sucker rod socket, Neilson safety sucker rod hook, Miller split bell nipple and the Neilson safety sucker rod elevator.

Oil Department Manager Announces Resignation

Harrison, N. J., April 4. — Alpin I. Dunn has announced his resignation as manager of the oil department of the National Oil Products Company of Harrison, New Jersey.

Mr. Dunn owns a large and picturesque tract of acreage located on the new Bronx River Parkway, Westchester County, New York, within one mile of White Plains and it is his intention to start development of his holdings along the line of a co-operative residential country club this coming summer when the Parkway is opened to traffic.

Mr. Dunn does not propose to give up all his interests in the oil business, however, and has made arrangements to be a special representative for the National Oil Products Company on important matters, also to retain his interests in the Oil Trades Association, Inc., of New York of which he was president during 1922.

Purchasing Agents Talk On Service to Oil Trade

Tulsa, Okla., March 31.—Service the company renders to the oil trade, and the men behind the service were exemplified in short sales talks made by Continental Supply Company representatives and representatives of manufacturers whose products Continental distributes, here Tuesday night before members of the Purchasing Agents Association of Tulsa, J. H. Kountz, district manager of the Continental, presided.

Among those who spoke regarding the merits of their company's product were L. S. Allen of Tulsa, who explained the workings of the Titusville Forge Company's spiral stem; Harry Black who represented the Black Steel and Wire Company, Frank Hutchinson of the Moon Manufacturing Company and Harry Hinish of the Shaffer Specialty Company. Albert C. Bean, president of the Tnemec Paint and Oil Company of Kansas City, also addressed the purchasers as did L. R. McCallum of the Titusville Iron Works. C. L. and L. L. Wait of the Ohio Injector Company also were on hand.

Among the Continental men who were present were George W. Stake; Sam R. Clawson, district sales manager; C. G. Bailey, district credit manager; C. N. Swanson, store manager; J. E. Walker, F. P. Thieman, Frank J. White and others.

Bob Gilmore, general manager of the Williamsport Wire Rope Company of Williamsport, Pennsylvania, was recently in the Mid-Continent field and visited at the company's offices in the Kennedy building in Tulsa. Although as busy as ever talking wire rope, Mr. Gilmore found time to tell the boys a little of the election of Brother Hughie back in Williamsport as well as about the celebration that followed.

Building a Refinery or Natural Gasoline Plant?

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Type "CX"

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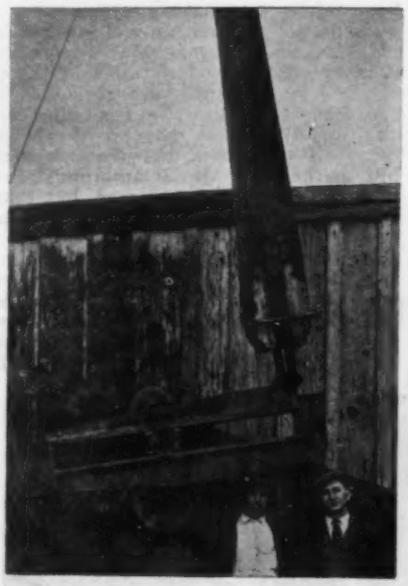
NEW EQUIPMENT, CATALOGS, BULLETINS, BOOKS

Special Drilling Device Gives Excellent Results

A device that will provide a drilling motion similar to that produced by a steam engine has been patented and placed on the market by W. Z. Allen of Graham, Texas. The device is for use when internal combustion engines or electric motors are the source of power in cable tool drilling. It is known as the Allen Drilling Device, and has been used successfully in drilling with a 25 h.p. gas engine in the Young County oil field, while other tests are now being drilled with the device.

The device is divided into two main parts, consisting of two jack posts, and a balanced beam constructed of two



Device for use with internal combustion engines for drilling

pieces of 12-inch channel iron 15 feet in length and a link casting. The two jack posts are adjacent to the engine house at the rig, with the main post supporting the driveshaft and crank extending out from the band wheel. The fore end of the balance beam, which has a slot, or rectangular guide, links up with the crank pin on the main post, while the other post is planted on a sub-sill and keyed to the mud sill about eight feet and six inches back of the main post. This rear post is provided with bearings on its top to serve as a pivot for the balance beam, and sufficient space is provided in the bearings on the pivot post to permit the balance beam to be swung out to one side sufficient distance to disengage the beam from the crank pin on the fore end when it is desired to bail or pull the tools from the hole.

On the top side of the fore end of the beam a hook is provided on the link, or slot casting, to connect with stirrup on the regular walking beam pitman, and it is the downward pull on this pitman that puts the tools into action.

When the Allen drilling device is connected up to the crank pin, extending out from the band wheel, and the engine or motor starts going, the revolving crank pin travels in the slot or rectangular guide provided in the casting on the balance beam, and in doing so the beam works up and down, thereby providing the rocking motion that is necessary in operation of cable tools. The length of the stroke given the tools can be regulated by the crank pin's position on the crank. A bronze bearing is used on the crank pin, and automatic lubrication is performed by means of oil cups on the link casting.

The drilling device permits the engine or motor to travel at a constant speed, while the walking beam is given two distinct rates of speed, and the jerking motion of the tools is absorbed by the device. It is built of material that will withstand the heavy duty required in cable tool drilling, and weighs about 1800 pounds, with the heaviest unit being about 600 pounds in weight. According to claims made by Allen, the device provides the drilling motion that is found lacking in cable tool drilling when other than steam is used, and affords a saving in both cost and time in drilling in cable tools country, as big water and fuel bills are avoided. The scarcity of drilling water that followed the dry spells experienced each summer by Young County operators was instrumental in Allen becoming interested in perfecting such a device, as he was engaged in the oil field supply business and the scarcity of water materially curtailed his sales. The first model of the device was made of wood, and was used successfully in deepening a well in the South Bend field.

Further information can be had regarding the device by corresponding with W. Z. Allen, Graham, Texas.

High Speed in Changing Feature of Eureka Tongs

Several features of improvement are embodied in the All-Purpose Eureka pipe and tool joint tongs, now being marketed by the LeBus Rotary Tool Works, Electra, Texas.

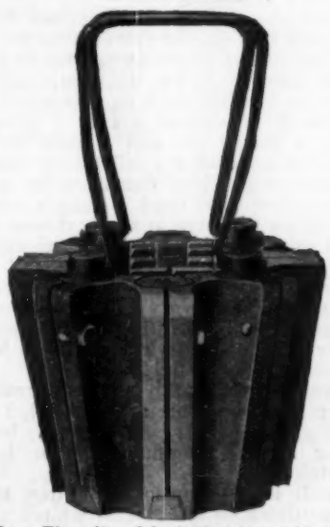
In the new tongs, the grips permit high speed in changing, feature of considerable inmportance. It is also claimed that the tongs are non-breakable and will not crush the pipe.

All-purpose Eureka Pipe and Tool Joint tongs

The control handle carries a latch of good design, as neither jaw is required to latch the tongs, even after it has received a maximum of wear.

The tongs carry all sizes of pipe casing and tool joints and are manufactured in two models, "L" and "K."

Further information can be secured by writing the LeBus Rotary Tool Works of Electra, Texas.



New Titusville fishtail break-put block

Fish Tail Break-Out Block Utilizes Rotary Table

The Titusville Iron Works Company, Titusville, Pennsylvania, has just brought out as one of their new specialties for rotary drilling, a fish-tail break-out block.

By means of this block the rotary table is utilized in place of the old tong and sledge method, for screwing and unscrewing fish tail bits in the drill collar.

This break-out block is made of steel which affords the necessary strength without being cumbersome to handle. Its use is said to save a considerable amount of time.

The Continental Supply Company is distributing the new block and information can be secured by writing any branch of this company, or by writing the Titusville Iron Works Company, Titusville, Pennsylvania.

VALUATION BOOK ANNOUNCED

The book "Valuation of Oil and Gas Land" by Robert Wesley Brown is just off the press. The purpose of the book is to present in as simple a manner as is consistent with the technical nature of the subject, the principles underlying the valuation of oil and gas lands. The subject is intimately connected with geology, engineering, economics, accounting and taxation, but the writer has endeavored to refrain from expanding on any of these subjects when not related to the main theme of the book.

This book may be secured from The Gulf Publishing Company, P. O. Box 1307, Houston, Texas.

LETTERS OF Paul Peebles P.S.G.

mi deer cleopatry

well cleo hunny I was shore disappointed that yu did not cum up for the banket of the geeology meetin & I am also glad that yu did not. jelmer thomas has bin up 2 sum moar of his tricks & if yu had a cum I gess yu wud a forgat yu was a lady by the time yu seen what a feller frum denver named russell loyd dun 2 yu. he is the saim feller what tried 2 make a munky out of yu last yere at sresport wen they had gotten me in jail for bootleggin. I only herd about it that time & I was a good mine 2 beet him up, & wen I seen with mi own eyes what he done I was moar of a mine 2 beet him up only I am a peec lovin man & he is about yore size and bill.

well 2 begin at beginnin & make a long story as short as possybul, I will tell yu about all I done today, beginning at the 'beginnin & not leevin mutch out.

well in the mornin I gotten up & went down to the meetin whitch started pretty erly for a man of mi habits but I soon seen that it was not no use for me to hang around there on akount it was a hole lot of speekers on the program whitch was takin up all the time & it was no chanct for me 2 git 2 maik no talk, so I just hung around outside of the meetin 2 wate for a excursion whitch was 2 be made free and grattis for nuthin & a barbecue at barbers hill throwed in besides, & also 2 goose creek.

I aint bin 2 barbers hill sinct I made a lokashun there about 20 yeres ago & they wud not drill where I sed but went on the other side of the dome. well what did they git? they is still lookin for enuff oil 2 pay for the hawlin they done 2 git pipe down there. they did finely cum back & drill where I sed at first & gotten a 5000 barrels well but only 1 and it did not help mutch only 2 pruve I was rite at the first plase.

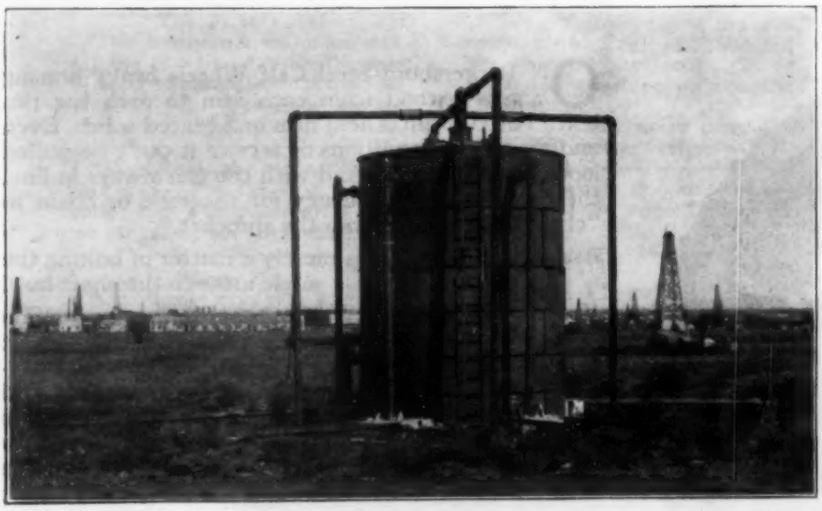
well me & a yung feller what werks for the oil weakly went down 2 the plase where they starts from & horned in for 2 of the rides whitch the committy had bummed for them attendin the meetin & we gotten in the car with a feller name of pope whitch juggles figgers for the gulph co whitch uster be the guffy wen I was werkin for them at spindle top. & mi ole frend joe jensen whitch I aint seen sinct I was out to lost angeles last yere. well we went down 2 barbers hill with the rest of the buntch whitch was about 300 & made enuff dust on the rode for a milyun. I gotten along fine with evrybody & it wud a bin alrite if joe cud jest forgit that he is from calyfornia & how good the wether is in lost anglus. also 1 time he was talkin polytics & sed them dam demmycrats 1st & I wud a throwed him out of the car only he was warin mi overcoat & I did not want it 2 git lost.

wen we gotten 2 barbers hill it was runnin 2 form with a disappointment on akount they sed mi old fren john henry kirby wud make a talk & he was not there. another disappointment 2 me was that it was moar barbercue than me & the rest of them cud eet. & I tell yu cleo these hear geeologists shore has got a appertite for bull. they can lissen 2 it all morning & eet it most all afternoon, but them barber hill barbercuers is 2 ambitious for them. it was shore sum feed, but that wasnt no plase for a irishman what is keepin lent & today friday.

well I et so mutch that I had 2 go lay down in the car while sum feller was telling them how menny holes it is in the feeld & how far they go down in the red. it was a hole lot of the fellers whitch never had seen no salt

Characters of "Tommy's Libretto," appearing before the geologists at their convention banquet. Reading from left to right: Percy (I. Perrine), Ida (W. C. Kite), Buster (Ben Stroud), Paul (R. L. Dudley), Cleopatry (E. R. Lloyd), Frankie (J. M. Sikler), Mose (David Donoghue), Maude (George Sawtelle), Zeke (R. B. Whitehead), Tramp (E. L. DeGolyer); seated, Mr. Shean (J. Elmer Thomas), Teacher (Luther White), Mr. Gallagher, (J. Earle Brown).

PERFECTION VAPOR PRESSURE TANKS
WOOD, AND BOLTED STEEL TANKS



A typical installation on the McCoomb farm, Burbank district, Oklahoma. This Perfection Vapor Pressure Flow Tank is owned by the Gypsy Oil Company.

When Your Well Makes Both Gas and Oil

It's hard to find words that will fittingly describe the good points of our Perfection Vapor Pressure Flow Tank used as a gas separator without seeming a little "over-enthusiastic."

For any piece of oil field equipment that is paying regular dividends instead of being an expense is bound to create wonderment.

And that's exactly what you will have in the purchase of a Perfection Vapor Pressure Flow Tank—an investment instead of an expense.

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It will handle wells making oil and gas in any quantity—big or little, it makes no difference—separates the gas and oil completely and makes available for lease fuel any quantity of gas you want for that purpose. It's feasible as has been demonstrated time after time to send the remainder of the gas or any part of it to the nearest gasoline plant where you will get the regular market price for your natural gasoline.

Built right of best rust-resisting copper alloy steel, extra well braced with stays and struts to more properly withstand pressure and vacuum, provided with fool-proof pressure and vacuum valves, the Perfection Vapor Pressure Flow Tank is the last word in mechanical excellence.

A visit to any one of our scores of installations can't help but convince you.

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PARKERSBURG STEEL CALF WHEELS

Furnished with an Adjustable Spooling Clamp when desired

ON Parkersburg Steel Calf Wheels heavy bracing angles extend from each arm to each tug rim bolt. The tug rim is held firm and braced solid. Even under severest conditions of service it can't be pulled loose or out of line! And with the rim always in line, there's never any tendency for the rope or chain to "climb" or "jump" from the sprocket.

Assembly in the field is merely a matter of bolting the angle arms to the shaft hub!

The patented construction of the Pareelite* Shaft Hub insures a true-running, well-balanced wheel. The hub is securely bolted to the heavy pipe shaft, and cannot be displaced, damaged or bent in handling or in service.

Pareelite* Gudgeons are forced into the heavy pipe shaft under hydraulic pressure, and are held by bolts through the gudgeon bands.

The split Pareelite* Spooling Flange is clamped to the shaft, and rests against the gudgeon band. Its design secures strength without excessive weight.

The Brake Wheel includes standard wooden cants, staggered, nailed together and bolted between two circles of steel cants.

Arms of unequal legged angles are riveted to the steel cant circles, for bolting to the shaft hub. This makes it possible to take up shrinkage in the cants throughout the circumference of the wheel.

Filler cants can be easily and quickly replaced by removing the outer ring of steel cants and arms.

Any standard tug rim can be applied to Parkersburg Steel Calf Wheels—but exceptional satisfaction is assured with Parkersburg Pareelite* Tug Rims—which have a justly earned reputation for uniformity and balance.

*Pareelite is a "High Manganese" metal—not cast iron—that will sustain a load of 4320 lbs. on arbitration test bar of the American Society for Testing Materials, and with only 7-64th inch deflection at breaking point. It has an ultimate tensile strength of 33,680 lbs. per square inch.

In *elasticity*, Pareelite approaches more nearly to cast steel than any other cast ferrous metal!

Our nearest representative has further detailed information and will gladly answer any questions—or we will mail it if you prefer

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Say you saw it in The Oil Weekly

SQUEAKS from the BULL WHEEL

The First Year

The newly-married man was talking to a friend, a family man of long experience. "What did you call your mother-in-law after you were married?" he asked?

"Well," was the reply, "it was this way. For the first year I called her 'I say,' and after that we all called her 'Grandma'."

Some Dog

Nip Harper says that when he takes his double-barrel shotgun to go hunting, Towser refuses to be stampeded by trees hanging full of squirrels and would hunt nothing but quail. When he takes up his rifle, then the sagacious animal will not cast even a sidelong glance at a quail but gives his whole attention to squirrels. When Nip takes up his club, neither squirrels nor quail can secure any attention from Towser. He has eyes for rabbits only. And the other day when Nip took his pole and fishing tackle to go fishing awhile Towser gave a demonstration heretofore unknown in his curriculum. He went to work industriously digging up the ground in search of fishing worms.—Farmington (Missouri) Times.

"We are now passing the oldest inn in England," shouted the guide in the front seat, as the motor coach rolled over the landscape.

And a husky voice from the back seat asked: "Why?"—Life.

"Sweetheart, if you do not promise to be mine I will kill myself."

"Oh, surely, you will not do that."

"I will. I'll go out on your own front lawn and hang myself on a limb of a tree. Then perhaps you will regret your heartlessness."

"George, George, you—must not! Promise me you won't do that!"

"Ah! Then you do love me?"

"No. But dad told me that if I let you hang around here and he found it out he would cut my allowance in half."—American Legion Weekly.

Isaac: "You should pull the curtains down ven you kiss your wife. I saw you last night."

Abie: "The choke's on you. I wasn't home last night."

Proprietor: "Do you drink?"

Applicant for job: "Thank you, sir. I'll have a small one."

Help Wanted

Sandy and his lass had been sitting together about half an hour in silence.

"Maggie," he said at length "wasna I here on the Sawbeth nicht?"

"Aye, Sandy, I daur say you were."

"An' wasna I here on Monday nicht?"

"Aye, so ye were."

"An' I was here on Tuesday nicht, an' Wednesday nicht, an' Thursday nicht an' Friday nicht?"

"Aye, I'm thinking that's so."

"An' this is Saturday nicht, an' I'm here again?"

"Well, I'm sure ye're very welcome."

Sandy (desperately)—Maggie, woman! D'e no begin to suspect something?"—The Continent.

Going, Going, Gone

An ancient car chugged painfully up to the gate at the races. The gate keeper, demanding the usual fee for automobiles, called:

"A dollar for the car!"

The owner looked up with a pathetic smile of relief and said:

"Sold!"

---

dume before & they was kinder disappointed that the salt was not showin on top of the hill in plase of sum trees where the barbercue was helt.

then cum the best part of the trip. we heded for goose creek. & I was shore that I wud git 2 see yu but I did not.

why did yu not tell me that ole red is back in goose creek & was werkin on no 18 shillin for the humble co? I gess he is still as bigger liar as ever. as soon as he seen the geeologists cars cumin he run out side of the rode & kept hollrin where is paul peebles till I cum along. I asted him where was yu & he sed yu was gone 2 huston 2 go 2 the banket with me, so that made me happy bekaus I did not no but what he was tellin the truth.

well I cud not stop 2 fool with them on account of a gang I seen gatherin further on down & I thort they must hav a quart or sumthin the way they was hangin around, but wen I gotten there it was nuthin but bill rather tellin sum kids about the great goose creek oil feeld, the salt dume without no salt & anuther sand wenever they need it.

well we cum on back 2 town & as soon as I gotten 2 huston I fomed up mi land lady & told her I was back safe & she sed what was that 2 her, that the way I was cutting up lately stayin out late like I done the nite before she did not care if I never gotten back. well I was espectin she wud say yu was there but she did not & I seen I was in bad with her, but then I thort maybe yu was there & she was goin 2 surprise me bi lettin me not no it till I gotten out there, so I went & gotten me 2 tickets 2 the banket & borrowed me a sute so we cud go in stile, & wen I gotten home yu was not there. so there I was, with tickits & evrything & nobody 2 go with me & a handsome man like me looks lost at a swell feed like that without no lady along & a vacant chair next 2 him, so I jest had 2 ask mi land lady 2 go with me & she did & that is how cum I tooken her.

well hunny I do not no how they gotten holt of sum of mi notes 2 use for the program of what they had 2 eet, but I gess the comitty was runnin short & had 2 economize bi usin 2nd hand paper & they gotten sum sheets whitch I used 2 make memeranders on. but if yu was 2 sea one them tellyfome numbers is just a slick code I hav got like ned mcleen uses wen he wires tellygrams & aint no girls atall. it is mens numbers hunny as I wud not want girls number but yores like yu no is the werlds truth.

well after we had the eets down 2 the dinkyest little cup of coffy yu ever seen & a feller giv me a cigar, they started the talkin with jelmer runnin the show. he is jellus of me because I am so poplar with the ladys & wud call on me for no talk & had the humbul band there 2 drown me out in case I was 2 git up ennyhow. he let bill farish which aint no geeologist talk so he wud lend him the band for the evenin.

then after that they had the sh w. it shore did make me mad the way they made fun of me & yu but all the rest was funny & I shore did laff & evrybody elst 2.

ray dudley, whitch I always thort was a good frend of mine on akount he will lend me munny sometimes & wont let nobody elst hav none put on sum ole wore out close & made like he was me & him & that feller loyd I was tellin yu about cut up sumthin skandlus. also sum moar fellers whitch sung songs & stuff wile they was playin like they was havin a skool but cud not none of them lern nuthin even in a playlak skool.

it was 1 good thing about the show tho. they had a map of the barbers hill feeld showin the well whitch I lokated down there. I will mabe send yu it & also a pitcher of the buntch whitch was in the show & you can tell whitch wons is the wons whitch is playin like they is me & yu bi lookin in the pitcher.

well cleo I cum 2 goose creek 2 sea yu at last & yu was not there, but I hav got sum goose creek oil & sand on mi shoes & I am walkin lite so it will stay on as long as possybul. hunny I shore do love yu even if I do hav 2 take this hear widder 2 shows so she wont be hard on me about payin rum rent.

yore lovin paul.

COMPARE IT POINT *for* POINT *with other Orifice Meters*

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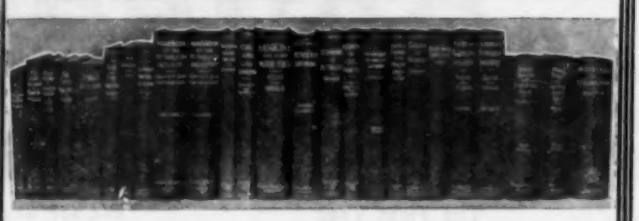

Books On Petroleum

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(The following is reprinted from our complete catalog of OIL BOOKS, which will be sent free on request. Watch this space from week to week for description of practically every book available on petroleum.)

The Technical Examination of Crude Petroleum, Petroleum Products and Natural Gases

By William Allen Hamor, Assistant Director of the Mellon Institute of Industrial Research, and Fred Wade Padgett, Associate Professor of Chemistry, University of Oklahoma. Mellon Institute Technochemical series. Including also procedures employed in the evaluation of oil-shale, and laboratory methods in use in the control of the operation of benzol recovery plants. This concise work makes readily available to chemists and to engineers the procedures of applying the physical and chemical tests which are recognized as essential by technologists. Because of the significance of benzol and of benzol-gasoline mixtures as motor fuels, a chapter is devoted to the laboratory methods in use in the control of the operation of benzol recovery plants. Part Two of the book is virtually a data handbook for the mineral oil and natural gas technologist—presenting all the physico-chemical data required for guidance in evaluating the products considered in the text. This data section is arranged systematically, following the order of the ten chapters of the text, and is complete as to constants, physico-chemical properties, conversion tables, specifications, laboratory equipment, etc. 591 pages, 6x9, 144 illustrations.

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By Clark Shove Robinson, Assistant Professor of Chemical Engineering at the Massachusetts Institute of Technology. Explains simply yet accurately, according to the best ideas of Physical Chemistry and Chemical Engineering, the principles of fractional distillation, illustrating these principles with carefully selected illustrations. 205 pages.

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By Edward Butler. Fourth edition, revised and greatly enlarged. (1921). This book is recognized as the standard text for engineers, users and others interested in the application of oil fuel for all steam raising, metallurgical and other purposes, for which liquid fuel can be usefully employed.

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Titusville Iron Works
United Iron Works Inc.
Wyatt Metal & Boiler Works

Rig Irons—
International Supply Co.
Lee C. Moore & Co.
Oil Well Supply Co.
Parkersburg Rig & Reel Co.
Republic Supply Company

Rotary Rock Bits—
Hughes Tool Co.

Rotary Fish Tail Bits—
Continental Supply Co.
Pelican Well Tool & Supply Co.
Regan Forge & Engineering Co.
Republic Supply Company
W-K-M Co.

Rubber Fillers—
National Rubber Filler Co.

Screens—
Pacific Oil Tools Co.

Sectional Steel Buildings—
The Braden Co.

Separators—
Butler Mfg. Co.
Trumble Gas Trap Co.

Strainers—
Layne & Bowler Co.
Pelican Well Tool & Supply Co.

Structural Steel—
Butler Mfg. Co.
Kansas City Struct. Steel Co.
Pennsylvania Tank Car Co.
United Iron Works, Inc.

Steel Derricks—
International Derrick & Equipment Co.
Lee C. Moore & Co., Inc.
Superior Tube Co.

Steel Crown Blocks—
Gulf Coast Mach. & Supply Co.
International Derrick & Equipment Company
Lee C. Moore & Co.
Parkersburg Rig & Reel Co.
Superior Tube Co.

Steel Manufacturers—
Colonial Steel Co.

Steel Storage Tanks—
Butler Mfg. Co.
Graver Corporation

Strainers—
J. H. McEvoy & Co.
W-K-M Co.

Sucker Rod Lines—
D. F. Connolly Agency
Continental Supply Co.

Sucker Rods—
Axelson Machine Co.
D. & B. Pump & Sup. Co.
Dunn Mfg. Co.
Frick-Reid Supply Co.
S. M. Jones Co.
The National Supply Cos.
Oil Well Supply Co.
J. P. Ratigan
Republic Supply Company

Sucker Rod Sockets—
Bradford Motor Works
Brown Welding & Machine Co.

Swabs—
B & C Machine & Foundry Co.

Tank Bolts—
Steel Mfg. & Warehouse Co.

Tank Cars—
Pennsylvania Tank Car Co.

Tanks—
American Tank Co.
Butler Mfg. Co.
Black, Sivalls & Bryson
The Brownell Co.
Gantz Tank Co.
Graver Corporation
Kansas City Struct. Steel Co.
Maloney Tank Co.
Columbia Steel Tank Co.
Parkersburg Rig & Reel Co.
Petroleum Iron Works
United Iron Works Co.
Wyatt Metal & Boiler Works

Tank Equipment—
Oil Conservation Engineering Co.

Tank Gauge Engineer—
L. M. Hall

Tret-O-Lite—
W. S. Barnickel & Co.

Thermometers—
Fort Worth Laboratories
The Foxboro Co., Inc.

Tongs—
Bridgeport Machine Co.
Dunn Mfg. Co.
Guiberson Corp.
LeBus Rotary Tool Works
Pelican Well Tool & Supply Co.
Wilson & Willard Mfg. Co.
W-K-M Co.

Tool Joints—
American Well & Pros. Co.
Baash-Ross Tool Company
Boykin Machinery & Sup. Co.
Bridgeport Machine Co.
Continental Supply Co.
Hughes Tool Co.
Pelican Well Tool & Sup. Co.
Regan Forge & Engineering Co.
Republic Supply Co.
W-K-M Co.

Tools (Fishing and Drilling)—
Bridgeport Machine Co.
Brown Welding & Machine Co.
Frick-Reid Supply Co.
Hughes Tool Co.
International Supply Co.
Oil Well Supply Co.
Peden Iron & Steel Co.
Pelican Well Tool & Supply Co.
Regan Forge & Engineering Co.
Republic Supply Company
Sullivan Machinery Co.
W-K-M Co.

Toothless Slips—
LeBus Rotary Tool Works

Tractor Winch—
Rock Island Plow Co.
Tulsa Rig Reel & Mfg. Co.

Traveling Blocks—
American Well & Pros. Co.
Baash-Ross Tool Company
Boykin Machinery & Sup. Co.
Gulf Coast Machine & Supply Co.
Lufkin Foundry & Machine Co.
Regan Forge & Engineering Co.

Tubing Catcher—
Dunn Mfg. Co.
Guiberson Corp.

Tubing Lines—
D. F. Connolly Agency

Tubing—
Republic Supply Company
Reading Iron Co.
Standard Seamless Tube Co.
Superior Tube Co.

Underreamers—
American Well & Pros. Co.
Bridgeport Machine Co.
Wilson & Willard Mfg. Co.

Vacuum Pumps—
Sullivan Machinery Co.

Valves—
Bradford Motor Works
Darling Valve & Mfg. Co.
The Charles N. Hough Mfg. Co.
Texas Oil Pump Co.
Ludlow Valve Mfg. Co.
Oil Conservation Engineering Co.
Pratt & Cady
Reading Steel Casting Co.
Reading Valve & Fittings Co.
Westcott Valve Mfg. Co.
W-K-M Co.

Valves and Fittings—
Continental Supply Co.
Darling Valve & Mfg. Co.
D & B Pump & Sup. Co.
F. W. Heitmann Co.
Ludlow Valve Mfg. Co.
Lufkin Foundry & Machine Co.
The National Supply Cos.
Peden Iron & Steel Co.
Pratt & Cady
Republic Supply Company
Reading Steel Casting Co.
Reading Valve & Fittings Co.
United Iron Works
W-K-M Co.

Walking Beams—
International Derrick & Equipment Co.
Lee C. Moore & Co., Inc.

Welding and Cutting Equipment—
Imperial Brass Mfg. Co.

Working Barrels—
Axelson Machine Co.
Bradford Motor Works
Continental Supply Co.
D & B Pump & Sup. Co.
Republic Supply Company
The Charles N. Hough Mfg. Co.
Texas Oil Pump Co.
McGregor Working Barrel Co.

Water Gauges—
F. W. Heitmann Co.

Water Cans—
H. P. Gott Mfg. Co.

Wire Rope—
Bridgeport Machine Co.
D. F. Connolly Agency
Continental Supply Co.
Houston Oil Field Material Co
International Supply Co.
Regan Forge & Engineering Co.
Republic Supply Company
The National Supply Cos
Williamsport Wire Rope Co.

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